

(Nos. 1-136)

1923—No. 1

JANUARY 11TH, 1923

American Society of Civil Engineers,

33 WEST THIRTY-NINTH STREET
NEW YORK CITY

**PRELIMINARY NOTICE
OF
APPLICATIONS
FOR
ADMISSION AND FOR TRANSFER**

The Constitution provides that the Board of Direction shall elect or reject all applicants for ADMISSION or for TRANSFER, and, in order to determine justly the eligibility of each candidate, the Board must depend largely upon the Membership for information.

This list is issued to members in every grade for the purpose of securing all such available information, and every member is urged to scan carefully each monthly list of candidates and to furnish the Board with data in regard to any applicant which may aid in determining his eligibility.

It is the DUTY of all MEMBERS to the PROFESSION to assist the Board in this manner.

It is especially urged, in communications concerning applicants, that errors in the record be pointed out and a DEFINITE RECOMMENDATION AS TO THE PROPER GRADING IN EACH CASE be given, inasmuch as the grading must be based upon the opinions of those who know the applicant personally, as well as upon the nature and extent of his professional experience.

If facts exist derogatory to the personal character or to the professional reputation of an applicant, they should be promptly communicated to the Board.

COMMUNICATIONS RELATING TO APPLICANTS ARE CONSIDERED BY THE BOARD AS STRICTLY CONFIDENTIAL.

The Board of Direction will not consider the applications herein contained from residents of North America until the expiration of thirty (30) days, and from Non-Residents of North America until the expiration of ninety (90) days from the date of this list.



ADMISSION REQUIREMENTS

Rules Adopted by the Board of Direction in Regard to
Requirements for Admission to the Various Grades of
Membership in the Society, April 18th, 1916*

The requirements fixed by the Constitution are intended to mark the minimum which should be recognized for admission to membership, and the maintenance of a high standard necessitates that these provisions should be interpreted conservatively to the end that the fitness of applicants shall be established beyond a doubt.

In order to shape more definitely the requirements in the classification of applicants for admission or for transfer, and to assure as far as possible that applicants for membership meet the spirit of the requirements established by the Constitution, it is the sense of this Board that:

- (1) No applicant shall be admitted to any grade whose qualifications are not shown to be clearly equal to the requirements of the Constitution.
- (2) In order to insure the fulfillment of these requirements, each applicant for admission or for transfer shall be required to furnish, if possible, the names of persons, whether members of the Society or not, who have personal knowledge of his work in each of the positions enumerated in his application. If possible, he shall name more than five references; and his application shall state in detail the character and extent of the works upon which he has been engaged, and the degree to which he was responsible for their design and execution.
- (3) In considering the requirements for the grade of Member the words "responsible charge of work" shall be interpreted to refer to work of considerable magnitude for which rule-of-thumb methods are not sufficient.
- (4) Responsible charge in engineering teaching may be construed as responsible charge of engineering work as required by the Constitution, Article II, Sections 2 and 3.

* In spite of the most careful scrutiny of all applications, criticism of the action of the Board in specific cases (that it has either been too lenient or too severe) has been heard. The above rules were the result of very full consideration of the subject, the object being to render as uniform as possible the treatment of all applications.

Am. Soc. for Civil Eng.

2-5-1924

AMERICAN SOCIETY OF CIVIL ENGINEERS

THE NAMES AND ADDRESSES OF THE MEMBERS OF THE BOARD OF DIRECTION
ARE HERE PRINTED FOR THE CONVENIENCE OF MEMBERS.

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Past-Presidents GEORGE H. PEGRAM.....165 Broadway, New York City.
ARTHUR N. TALBOT.....Univ. of Illinois, Urbana, Ill.
FAYETTE S. CURTIS.....Room 421, South Station, Boston, Mass.
ARTHUR P. DAVIS.....Care, U. S. Reclamation Service, Washington, D. C.
GEORGE S. WEBSTER.....816 Widener Bldg., Philadelphia, Pa.

REQUIREMENTS FOR ADMISSION.

Grade.	General Requirement.	Age (minimum)	Length of Active Practice.	Responsible charge of work.
Member.	Professional Engineer. Qualified to design as well as to direct work.	30 years.	10 years.†	5 years.
Associate Member.	Professional Engineer.	25 years.	6 years.†	1 year.
Affiliate.	Qualified by scientific acquirements or practical experience to co-operate with engineers.			
Junior.	Professional Engineer.	18 years.*	2 years.†	
Fellow.	Contributor to the permanent funds of the Society.			

* Membership ceases at age of 32 unless transferred to higher grade.

† Graduation from a school of engineering of recognized reputation is equivalent to 2 years' active practice.

LIST OF APPLICANTS.

Names and Addresses of Applicants for Admission and for Transfer on this Preliminary List,
Arranged Alphabetically.

Name.	Address.	Page.	Name.	Address.	Page.
ADAMS, JOHN M.	Santo Domingo, D. R.	5	MATTOON, ROY E.	Sawyer, Minn.	18
BALLINGER, ROBERT I.	Philadelphia, Pa.	5	MELCHER, CLARENCE L.	Princeton, Ill.	18
BATEMAN, JOHN H.	Ann Arbor, Mich.	33	MEYERS, MORRIS	New York City	19
BEGGS, GEORGE E.	Princeton, N. J.	33	MILLER, HAROLD T.	Ft. Humphreys, Va.	19
BENEDICT, THOMAS H.	New York City	5	MILLS, LOYOLA L.	Santa Rosa, Cal.	19
BERG, ULRIK W. T.	New York City	6	MORELAND, JAMES E.	Chattanooga, Tenn.	20
BERNEIKE, ELMORE G.	Atlanta, Ga.	6	MUDIE, JOHN M.	Detroit, Mich.	20
BERRY, WILLIAM C.	Valley Park, Mo.	6	MULLER, RICHARD F. A.	Washington, D. C.	20
BLAKE, HOWARD C.	Chicago, Ill.	6	MUNSON, THURMOND A.	College Station, Tex.	20
BREWSTER, WILLIAM	Lewisburg, W. Va.	7	NICHOLSON, ERNEST	New York City	21
BROWN, CHANNING B.	Charlotte, N. C.	7	O'SHAUGHNESSY, THOS. P.	San Francisco, Cal.	21
BURRELL, GLENN S.	Brooklyn, N. Y.	33	PARDOE, WILLIAM S.	Philadelphia, Pa.	22
CALLAGHAN, MICHAEL J.	San Francisco, Cal.	7	PATTERSON, DONALD	Cincinnati, Ohio	22
CAMPBELL, ARTHUR	Newton, Mass.	7	PATZIG, MONROE L.	Des Moines, Iowa	22
CLARK, THEODORE R.	Minneapolis, Minn.	8	PAUL, CARROLL	Marquette, Mich.	22
CLARKE, WILLIAM D.	Salem, Ore.	34	PAWLING, GEORGE F.	Philadelphia, Pa.	22
CLEVELAND, HENRY B.	East Schodack, N. Y.	34	PENICK, JUNIUS M.	Richmond, Va.	22
COUBEN, WILLIAM T.	Washington, D. C.	8	PENNIMAN, WILLIAM M.	St. Louis, Mo.	22
COLEMAN, JOSEPH P.	Greenville, Tex.	42	PERRIN, WILLIAM W.	Glen Cove, N. Y.	22
COOPER, CALVIN M.	Girard, Kans.	8	PETTIT, HOMER B.	Corozal, C. Z., Panama	43
CURRIE, FRANK S.	Ames, Iowa	8	PIRKNER, HERBERT R.	Brooklyn, N. Y.	23
DAVIS, DONALD G.	Utica, N. Y.	9	PONTZ, HARRY A.	Philadelphia, Pa.	23
DECKER, DAVID A.	Norfolk, Va.	9	PROCTOR, THOMAS W.	Chestnut Hill, Mass.	23
DEERING, EARL W.	Jefferson City, Mo.	9	PROVOST, ANDREW J., Jr.	New York City	24
DELLA FAZLA, NICHOLAS	New York City	10	PULLIAM, HENRY A.	Paducah, Ky.	24
DEPUY, AUGUSTUS B.	Collingswood, N. J.	10	RAMSAY, MALCOLM	Greenville, Tex.	24
DEY, BIENDRA N.	London, England	10	RAPP, WILLIAM G.	Bethlehem, Pa.	24
DOWS, WILLIAM G.	Cedar Rapids, Iowa	11	REIDY, MAURICE A., Jr.	New York City	23
EGIAZAROFF, JOHN B.	Petrograd, Russia	11	RICHARDS, WALTER C.	Sanford, Me.	25
ELFORD, HAROLD	Columbus, Ohio	11	ROBINSON, WILLIAM M., Jr.	Atlanta, Ga.	25
EVANS, EDWARD A.	Monrovia, Cal.	43	ROSS, WALTER	New York City	26
FISHMAN, HARRY A.	New York City	11	RUGGLES, MILTON	Hastings, Nebr.	26
FOX, JAMES M.	New York City	11	RUSSELL, CLAUD	Manila, P. I.	40
FRAME, THOMAS C.	Gettysburg, Pa.	35	SAMMET, FRANCIS P.	Carbondale, Ill.	27
FREEMAN, WILLIAM B.	Denver, Colo.	35	SAUTER, WILLIAM R.	Philadelphia, Pa.	27
GANGADHARAM MOODLIAR, L.	Secunderabad, India	11	SCHNEIDER, DELMONT J.	Pocatello, Idaho	27
GARDINER, JOHN H.	Tucson, Ariz.	12	SCHULTHEIS, ARTHUR	New York City	28
GIBSON, ROBERT C.	Arkadelphia, Ark.	12	SCIACCHITANO, JAMES J.	New York City	28
GILLESPIE, CHESTER G.	Oakland, Cal.	36	SEELEY, SETH H.	Columbia, S. C.	43
GREELY, JAMES C.	Mabelle, Tex.	12	SHAFFER, IVAN O.	Brooklyn, N. Y.	40
HANDE, JOHN H.	Baltimore, Md.	13	SHEDD, THOMAS C.	Urbana, Ill.	40
HANOVER, CLINTON D., Jr.	New Haven, Conn.	13	SHRYOCK, JOSEPH G.	Philadelphia, Pa.	28
HARRIS, CHARLES C.	Oklahoma City, Okla.	13	SNAITH, WILLIAM	Rochester, N. Y.	28
HARRIS, MILTON	Sacramento, Cal.	13	SPENCER, FREDERICK B.	New York City	28
HAUSMAN, ISAAC	Toledo, Ohio	14	STEELE, ISAAC C.	San Francisco, Cal.	41
HEPBURN, GEORGE H.	Necaxa, Puebla, Mex.	14	STEWART, LOWELL O.	Washington, D. C.	29
HILLIARD, ARTHUR E.	Allaben, N. Y.	14	STILES, LINFORD S.	Brooklyn, N. Y.	29
HILTON, JOSEPH K.	Clarion, Iowa	14	STOCKWELL, HARRY D.	Sewell, Rancagua, Chile	44
HINDS, JULIAN	Denver, Colo.	15	STOKES, R. C.	Houston, Tex.	41
HOPFEN, BERNARD	New York City	15	STREETER, HAROLD W.	Cincinnati, Ohio	30
HOSKINS, JOHN K.	Cincinnati, Ohio	36	TIEBOUT, CHARLES R.	Mt. Vernon, Ohio	30
HUTCHINSON, HAROLD S.	Flushing, N. Y.	15	TIETZEL, ALBERT M.	Corning, N. Y.	44
HUTTON, MURRAY L.	Ames, Iowa	37	VAN DER BOON, G. F. J.	New York City	30
JORDAN, JAMES C.	Pittsburgh, Pa.	37	VARNEY, EDWARD A.	Cambridge, Mass.	44
KADOW, ROBERT J.	Los Angeles, Cal.	15	VAUTER, ROBERT G.	Eskdale, W. Va.	45
KIRKHAM, HERBERT M.	Pittsburgh, Pa.	16	VON ABO, CECIL V.	Parys, S. Africa	30
KLUPT, ALEXANDER E.	Woodhaven, N. Y.	16	WADSWORTH, DALE T.	Dayton, Ohio	30
KLYCE, WILLIAM H., Jr.	Kansas City, Mo.	16	WALKER, FRANK B.	Winthrop, Mass.	31
KOFMAN, MENASHAH	New York City	17	WASHBURN, FRANK E.	North Little Rock, Ark.	41
KRUEGER, HERMAN J.	Jersey City, N. J.	17	WEINSTEIN, JOSEPH	New York City	31
LENT, RICHARD P.	Henderson, N. C.	17	WENDT, WYLIE B.	Rapid City, S. Dak.	42
LEWIS, DUDLEY L.	Ft. Worth, Tex.	17	WILCOX, JAMES M.	New York City	31
LYLE, ALEXANDER	New York City	17	WILSON, EDGAR K.	Plainfield, N. J.	32
MACDOWELL, ROLLIN F.	Cleveland Heights, O.	38	WOOD, EDWARD A.	Dallas, Tex.	42
MCCOLLOUGH, CHARLES A.	New York City	38	WOODWARD, HAROLD S.	Ithaca, N. Y.	45
MCMASTER, ROBERT N.	Redondo Beach, Cal.	18	WOOLWORTH, WENDELL H.	New York City	32
MANN, FRANKLIN H.	Ames, Iowa	18	WRIGHT, ARTHUR W.	New York City	32
MARSHALL, LESLIE S.	New York City	39	ZAHLEN, JOHN V.	Placerville, Cal.	32

fact that applicants give the names of certain members as references does not necessarily mean that such members endorse.

The numbers to the left of each record indicate the serial number of the applicant for the current year, and the district in which he resides. The note in heavy type represents, in each case, the estimate of the applicant of the time he has spent in Active Practice, Responsible Charge, and Designing. These figures do not include the allowance of two years for graduation.

FOR ADMISSION

1. 21. WADAMS, JOHN MIDDLETON—Obras Publicas, Santo Domingo, Dominican Republic—(Age 30. Born Bellingham, Wash.) (B. S. in C. E., Univ. of Wash., Seattle, Wash., 1918.)—Summers 1913–1915 (total 9 months) and Feb. to June 1916 Chainman, Rodman and Levelman, Eng. Dept., Whatcom County, Wash., Bellingham, Wash.: June to Sept. 1916 Transitman, same Department, in charge of field party on location and grades for concrete highways and miscellaneous surveys: July to Sept. 1917 Inspector, Great Northern Ry. Co., Cascade Div., on construction of heavy type timber snow-sheds: July, Aug. and Nov. 1918 Computer, Eng. Dept., Whatcom County, on earthwork quantities and costs for concrete and earth roads: Jan. to Dec. 1919 Engr., Bellingham Coal Mines, in charge of design and construction of railway spurs, coal tipple and miscellaneous buildings; also of mine surveys and layouts: Jan. and Feb. 1920 Draftsman, Northwest Link-Belt Co., Seattle, Wash., one half of day on design and detailing of various types of conveyors and coal-handling equipment; remainder of day post-graduate work, Univ. of Washington School of Mines: March to July 1920 Draftsman, Eng. Dept., Whatcom County, plans, maps and profiles pertaining to concrete highways, assessments and bridges: Aug. 1920 to Jan. 1921 Structural Draftsman, Dept. of Public Works, Dominican Republic, on design of concrete bridges and miscellaneous structures: Jan. to Aug. 1921 Draftsman, The Barahona Co., Inc., Barahona, Dominican Republic, on design of irrigation structures and water-works systems; plans, maps, etc., relating to same: Oct. 1921 to date Asst. Engr., Dept. of Public Works, Dominican Republic, in charge of construction and maintenance of government buildings for District of Santo Domingo; also plans of engineering structures. (Active practice 4.7 years: Res. Ch. 2.2: Design 2.7). Refers to J. B. H. Bardury, W. E. Brown, J. H. Caton, 3d, F. W. Stephens, A. A. VanPetten, L. H. Walker, R. M. Warfield.

1. 28. BALLINGER, ROBERT IRVING—12th and Chestnut Sts., Philadelphia, Pa.—(Age 30. Born in Maryland.)—1915 graduated from Pratt Inst. and received certificate in Architectural Construction: 1915 to 1916 (9 months) with Irwin & Leighton, Bldg. Contrs., Philadelphia, Pa., as Asst. Supt. of construction on Ocean Steamship Terminals at Savannah, Ga.: 1916 (4 months) Field Engr., Westinghouse, Church, Kerr & Co., on sugar refinery at Port Wentworth, Ga.: 1916 to date (6 years) with Ballinger & Perrot (later The Ballinger Co.), Archts. and Engrs., Philadelphia, as Supervisor and Clerk of Works on several large jobs, one in Pittsburgh for Pennsylvania Chocolate Co., plant consisting of 7-story reinforced concrete building and power house (cost about \$750 000), had charge of erection of buildings and installation of mechanical equipment, boilers, generators, high-pressure piping and process machinery; past 3½ years has acted as Gen. Supt. in charge of Constr. Dept., having charge of practically all construction work of Company, also supervision of work done under general contract and of mechanical work in buildings; had charge of over forty buildings (all kinds of construction, cost about \$8 000 000). (Active practice 7.1 years: Res. Ch. 6). Refers to W. F. Ballinger, C. deMoli, C. A. Mead, S. Smith, B. White.

1. 45. BENEDICT, THOMAS HAROLD—150 West 91st St., New York City—(Age 24. Born West Pittston, Pa.) (C. E., Princeton Univ., 1921.)—Sept. 1920 to Feb. 1921 Draftsman, Consolidated Gas, Electric Light & Power Co. of Baltimore, Md.: Dec. 1921 to Oct. 1922 Timekeeper and Asst. to Supt., Wm. L. Crow Constr. Co., New York City, on large construction work in Tarrytown, N. Y. (Active practice 1.2 years). Refers to G. E. Baggs, F. O. Blackwell, F. H. Constant, C. H. Higgins, A. Rheinstein.

FOR ADMISSION

BERG, ULRIK WILHELM TORNOE—421 West 57th St., New York City—(Age 32. Born Stavanger, Norway.) (C. E., Trondhjem Tekniske Loereanstalt, Norway, 1912.)—July 4 1912 to Dec. 1916 Designing Engr., reinforced concrete structures, Trussed Concrete Steel Co., Kensington, London, England: Dec. 1916 to March 1918 Chf. Concrete Engr., (1) Fougner Staal-Beton Skibsbygning Co. (Fougner Steel-Concrete Shipbuilding Co.), Christiania, Norway, concrete ships, floating dry docks, barges, etc.: March to Dec. 1918 Special Engr., Fougner Concrete Shipbuilding Co., New York City: May 1919 to Dec. 1920 in private practice as Cons. Engr., Christiania, Designer of concrete structures: June 1921 to June 1922 Designing Draftsman, reinforced concrete structures, White Constr. Co., New York City: June 1922 to date Designer, reinforced concrete structures, Barney-Ahlers Constr. Corporation, New York City. (**Active practice 9.7 years: Res. Ch. 7: Design 2.7.**) Refers to R. L. Berlin, H. Fougner, T. Holst-Grubbe, F. Leiser, O. S. Schlich.

BERNEIKE, ELMORE GUSTAVE—39 S. Gordon St., Atlanta, Ga.—(Age 31. Born Cleveland, Ohio.) (B. S., Case School of Applied Sci., 1912.)—1912 to 1913 (6 months) Draftsman, 5 Crowell & Sherman Co., Gen. Contrs., Cleveland, Ohio, detailing and designing structural members of reinforced concrete buildings: 1913 (4 months) Draftsman, T. H. Brooks Co., (10) Iron Works, Cleveland, detailing structural iron members of buildings: 1913 to 1914 (1 year) Timekeeper, Field Engr. and Asst. Supt., Bolton-Pratt Co., Gen. Contrs., Cleveland, on erection of reinforced concrete factory building and concrete, brick and steel school building: 1914 to 1917 Dist. Bldg. Inspector (1½ years), Inspector of reinforced concrete (1 year) and Asst. Engr. of Constr. (7 months), Div. of Bldgs., Cleveland: 1917 to 1918 (1 year) Asst. Civ. Engr., Firestone Tire & Rubber Co., Akron, Ohio, on factory building construction and maintenance: 1918 to 1921 Asst. Engr. of Constr. (4 months), Engr. of Constr. (6 months), Asst. Works Engr. (2 months) and Works Engr. (2 years), National Carbon Co., Cleveland: 1921 to 1922 (5 months) Service Engr., Hydr. Steelcraft Co., Cleveland, erecting steel buildings: May 1922 to date Sales Engr., Southern Clay Mfg. Co., Chattanooga, Tenn., on promotion and sale of vitrified paving brick. (**Active practice 9.7 years: Res. Ch. 4: Design 1.2.**) Refers to E. E. Duff, Jr., M. B. Greenough, F. H. Neff, D. R. Schock, C. W. Schubert.

BERRY, WILLIAM CHAPMAN—Valley Park, Mo.—(Age 28. Born Chicago, Ill.) (B. S., Washington Univ., St. Louis, Mo., 1915.)—June 1916 to May 1917 Rodman, Instrumentman and Concrete Designer for C. E. Smith, Cons. Engr., St. Louis, Mo.: May 1917 to Sept. 1919 Capt., Motor Transport, Q. M. Corps, U. S. Army, 1 year in France: (14) Sept. 1919 to date Asst. Highway Engr., St. Louis County, Mo., on plans for Federal Aid road work, in charge of construction of Clayton Road (\$99 000, Warrenite bitulithic), Constr. Supt. on St. Charles Road, Federal Aid Project 79 (13 miles, concrete and brick); during 1922 in charge of all road construction, including State highway work also strictly County work (total expenditure over \$1 500 000). (**Active practice 6.5 years: Res. Ch. 2: Design 1.7.**) Refers to H. E. Frech, R. Jablonsky, A. Lewald, C. E. Smith, W. Stoecker, E. O. Sweetser, J. L. Van Ornum.

BLAKE, HOWARD COLBURN—4621 Greenwood Ave., Chicago, Ill.—(Age 38. Born Boston, Mass.)—1902 to 1905 student, Massachusetts Inst. of Technology: 1905 to 1906 (1 year) 7 on general construction with Norcross Bros., Worcester, Mass.: 1906 to 1907 (about 1½ years) general construction work, Timekeeper and Asst. Bldg. Supt., Ayer Bldg., (8) Emporium Bldg. and others, San Francisco, Cal.: 1908 to 1909 (about 1½ years) general construction work as member of firm, Ramsden, Blake Co., Berkeley, Cal.: 1909 to 1910 (about 1 year) Gen. Constr. Supt. on series of substations for Pacific Gas & Elec. Co., San Francisco, Cal.: 1910 to 1912 (about 1½ years) Sacramento Valley Office Mgr. and in charge of work for C. W. Dickey, Archt., Oakland, Cal.: 1912 to 1914 (2½ years) ill most of time, also on small miscellaneous work, mostly construction: 1915 to 1917 (2 years) on series of engineering work, including wooden and concrete pile piers, covering extensive study of piles and pile protection with testing and laboratory testing and study of general construction materials; supervised entire construction work and considerable of the design: 1917 to 1919 (2 years) Capt., Engrs. 1½ years in France, Engr. Officer in charge Givres, France, work including complete supervision, design, construction and operation: 1919 to date (3½ years) Chf. Engr. and in charge of Eng. and Constr. Depts., Morris & Co., Packers, U. S. Yards, includes all design, buildings and engineering and supervision of all construction, all design and construction carried on by Company's forces. (**Active practice 13.7 years: Res. Ch. 11: Design 7.5.**) Refers to B. J. Arnold, W. T. Blunt, F. D. Chase, W. C. Curd, A. C. Everham, J. R. Hall, C. G. Hyde.

FOR ADMISSION

EWSTER, WILLIAM—Box 407, Lewisburg, W. Va.—(Age 44. Born Plymouth, Mass.) (S. B., Mass. Inst. Tech., 1898.)—Jan. to July 1903 Asst. Engr., Chas. H. Thrall & Co., Contrs., Havana, Cuba, on extension of Western Ry. from Pinar del Rio to San Luis, Cuba: July 1903 to July 1905 1st Asst. Engr., Dept. of Public Works, Pinar del Rio Province, Cuba, in charge of highway and bridge construction: July 1905 to Jan. 1908 Supt. of Constr., E. A. Geberga & Co., Contrs., Havana, in charge of highway construction contracts: Jan. 1910 to Jan. 1915 Engr. Inspector, Dept. of Public Works, Borough of Manhattan, New York City: April 1915 to Oct. 1917 Constr. Supt., E. H. Brown, Inc., Hempstead, N. Y., in charge of highway and bridge construction contracts: Oct. 1917 to Jan. 1918 on construction at Aviation Field, Mineola, N. Y.: Jan. 1918 to April 1919 Mech. Engr., Gillespie Loading Co., Morgan, N. J., on construction of water supply, steam plants, etc.: April 1919 to July 1921 Highway Engr., U. S. Bureau of Public Roads, West Virginia office: July 1921 to date with same Bureau in charge of Federal Aid work in West Virginia, until Feb. 1922 as Highway Engr., and since then Senior Highway Engr. (Active practice 17.7 years: Res. Ch. 11.2: Design 2.7). Refers to H. K. Bishop, J. C. Carpenter, E. K. Cortright, C. P. Fortney, B. E. Gray, J. K. Monroe, V. M. Peirce.

OWN, CHANNING BOLTON—Southern Power Co., Charlotte, N. C.—(Age 25. Born Charlottesville, Va.) (C. E., Univ. of Va., 1919.)—June to Sept. 1915 Rodman and Instrumentman, Dupont Eng. Co., at Hopewell, Va., on layout of powder plant: June to Sept. 1918 Instrumentman and Chf. of Party, The Foundation Co., at Seven Pines, Va., on layout of buildings, tracks and equipment for powder bag loading plant: Sept. 1918 to June 1919 Instructor in Plane Surveying and R. R. Eng., Univ. of Virginia: June 1919 to Jan. 1920 Instrumentman and Chf. of Party, Dupont Eng. Co., on construction of 400-house village, office building and storage building (both reinforced concrete) for Oakland Motor Car Co., Pontiac, Mich.: Jan. 1920 to June 1921 Detailer, Estimator and Salesman of structural steel, reinforcing bars and miscellaneous iron, Southern Eng. Co., at Charlotte, N. C.: June 1921 to Feb. 1922 Inspector and Jun. Engr. with Gilbert C. White, Cons. Engr., Durham, N. C., on Rock Hill (S. C.) Project of street pavement and improvement: Feb. 1922 to date Designer in reinforced concrete and structural steel, Southern Power Co., Charlotte, on hydro-electric developments at Mountain Island (80 000 h. p.) and Great Falls (60 000 h. p.) and 9 000 boiler h. p. steam station at Mount Holly. (Active practice 3.8 years: Res. Ch. 0.7: Design 0.8). Refers to J. Bolton, A. C. Lee, W. S. Lee, E. L. Scruggs, G. C. White, O. Z. Wrenn.

LLAGHAN, MICHAEL JOSEPH—2489 Howard St., San Francisco, Cal.—(Age 41. Born San Francisco, Cal.)—1899 to 1906 (7 years) Apprentice and Mechanic in shipbuilding, Union Iron Works Co. of San Francisco: 1906 to 1910 (4 years) Mechanic and (2½ years) Foreman on reinforced concrete and structural steel buildings, Ferrolite Co., Cotton Bros., Kittle Constr. Co., and other contractors: May 1910 to April 1918 with City Engr. of San Francisco as Surveyor's Field Asst., Surveyor and Draftsman: April 1918 to Oct. 1919 Foreman and Ship Supt. in charge of construction of warships, Bethlehem Shipbuilding Corporation: Jan. to March 1920 Draftsman with Fred H. Tibbets, Cons. Engr.: March to Sept. 1920 with John Oglesby, Civ. Engr., as Engr. in charge of design of 22 miles of streets and highways and six bridges: Sept. 1920 to Feb. 1921 Structural Draftsman on theatre design with G. Albert Lansburgh, Archt.: March 1921 to April 1922 Valuation Engr. with City Attorney of San Francisco: April 1922 to date Engr. on design with City Engr. of San Francisco. (Active practice 23.2 years: Res. Ch. 5.5: Design 1.5). Refers to J. O. Burrage, N. A. Eckart, N. R. Ellis, C. E. Healy, M. M. O'Shaughnessy, J. M. Owens, J. T. Ryan.

AMPBELL, ARTHUR—20 Lewis Terrace, Newton, Mass.—(Age 33. Born Lowell, Mass.) (Ph. B., Sheffield Sci. School, 1912.)—July 1912 to May 1913 Instructor, Bureau of Education, Philippine Islands, taught mathematics in Provincial High School at Bayombong, Nueva Vizcaya Province: June 1913 to Feb. 1914 Computer, Bureau of Navigation, Div. of Port Works and Lighthouse Constr., Manila, Philippine Islands, made progress reports, designed small details for light stations, inspected construction near Manila: March 1914 to May 1915 Supt. of Constr., Standard Oil Co. of New York, Shanghai, China, on construction of oil tanks, godowns, residences, candle factory, and repairs and alterations to buildings in various places in North China: June 1915 to Dec. 1917 Asst. to Superv. Archt., Yale Foreign Missionary Society, Changsha, China, on construction of residences, chapel, dormitories, hospital, etc.: Jan. 1918 to May 1922 with Andersen,

FOR ADMISSION

Meyer & Co., Ltd., Importers, Exporters and Engineers, at Shanghai, until Aug. 1919 as Local Mgr. at Changsha, general agency work, also installing 625-kw. light plant at Changsha; then Res. Engr. at Swatow, China, on construction of large group of buildings for Chinese Maritime Customs, consisting of custom house, examination shed, club, houses for eighteen families, quarters for servants, boatmen, etc., carpenter shop, boat shed, boundary walls, decorative iron fences, roads, sidewalks, drainage, septic tank and street lighting systems and slipway, work including design and redesign when drawings were inadequate: at various times also on private work, including design of two residences at Changsha; acted in consulting capacity and designed 5th story for a 4-story reinforced concrete building at Swatow, China. (Active practice 9.8 years: Res. Ch. 6.2: Design 2.7). Refers to J. H. Black, R. L. Larson, C. S. Paget, F. R. Sites, P. P. Whitham.

CLARK, THEODORE ROOSEVELT—805 East River Road, Minneapolis, Minn.—(Age 24. Born Rodney, Iowa.) (B. S. in Civ. Eng., Iowa State Coll., 1922.)—June 1919 to Sept. 12 1920 Asst. County Engr., Plymouth County, at Lemars, Iowa, on surveys for improvement of roads and drawing of plans for roads, culverts and drainage district: June to (7) Sept. 1921 Inspector of materials for Plymouth County: June to Sept. 1922 with American Vibrolithic Corporation of Des Moines, Iowa: at present Instructor of Highway Eng., Univ. of Minnesota. (Active practice 1.7 years). Refers to T. R. Agg, A. H. Fuller, J. H. Griffith, A. Marston, C. S. Nichols.

COBURN, WILLIAM TURLEY—2417 Quarry Rd., N. W., Washington, D. C.—(Age 37. Born Washington, D. C.)—Student in Mech. Eng., Maryland Univ. (2 years) and in 13 Civ. Eng., George Washington Univ. (evenings, 3 years): Jan. to Nov. 1907 Rodman, Southern R. R., Washington, D. C.: Nov. 1907 to Sept. 1913 Office Engr. of Bridges, (5) Washington, D. C., Transitman, Draftsman, Inspector, in charge of office, part of time on design: Sept. 1913 to May 1914 Cost Engr. and Transitman, Salmon River Power Development, and Oct. 1914 to May 1915 Engr. and Inspector of dredging, Cape Cod Canal Development, with Barclay, Parsons & Klapp: May to Oct. 1914 with The Foundation Co. as Engr. on Hooker Electric Chemical Co. Development, Niagara Falls, N. Y.: May 1915 to Jan. 1917 with Jarrett & Chambers Co., Inc., until Nov. 1915 as Engr. and Asst. to Supt., American Synthetic Dyes Co. Development, Newark, N. J.; then Office Mgr., Bear Lake Power Station Development, Idaho: Jan. 1917-1922 (except 8 months with U. S. Army) with The Foundation Co. as Engr., Asst. to Supt. and Office Mgr., on Norfolk-Berkeley Bridge, Norfolk, Va., Washington (D. C.) Navy Yard Shrinkage Pit, bag loading plant, Tullytown, Pa., Central of New Jersey Bridge, Easton, Pa., Sterlington (N. Y.) Iron Co. Development, Northeast Elec. Bldg., Rochester, N. Y., White Dental Co. Bldg., Princess Bay, N. Y., Huntington (Pa.) Silk Mill Bldg., Gen. Fire Corporation, Warren, Ohio, Moundsville (W. Va.) Slope Mine, and Kentucky & West Virginia Power Co. Development, Logan, W. Va.: March to Sept. 1922 private work, construction, at Logan: Sept. 1922 to date in Amortization Sec., Income Tax. (Active practice 15.2 years: Res. Ch. 7.8). Refers to R. H. Chambers, F. S. Crowell, H. J. Deutschbein, W. J. Douglas, C. B. Hunt.

COOPER, CALVIN MACY—Girard, Kans.—(Age 39. Born Columbus, Kans.)—1908 to date studied Civ. Eng., International Correspondence School: Aug. 1912 to Aug. 1921 City 14 Engr., Columbus, Kans., in charge of design, construction and maintenance of paving, sewers and water-works: Jan. 1913 to July 1917 also Cons. Engr., City of Baxter (15) Springs, Kans., in charge of design and construction of streets, sidewalks and bridges, and city surveying: Jan. 1915 to Jan. 1919 also County Surveyor, Cherokee County, Kans., on land surveys, drainage, platting town sites and mine surveys: since April 1917 also County Engr., Cherokee County (April 1917 to May 1921) and Crawford County, Kans. (Aug. 1921 to date), in charge of design, construction and maintenance of roads, bridges and paving and preparation of Federal Aid road plans. (Active practice 10.3 years: Res. Ch. 10.3: Design 10.3). Refers to R. F. Gallup, P. L. Grady, R. C. Gray, E. McCullough, J. B. Marsh, H. A. Rowland, A. J. Smith, L. B. Smith.

CURRIE, FRANK SHIELDS—2713 Boone St., Ames, Iowa.—(Age 28. Born Webster City, Iowa.)—June 1911 to Sept. 1912, June to Sept. 1913 and June 1914 to Sept. 1915 15 Instrumentman for C. H. Currie, Webster City, Iowa, on surveys, drainage work, etc., and last 1 1/4 years also Engr. in charge of sanitary sewer system at Jewell, Iowa: (7) April 1916 to Dec. 1917 Asst. County Engr., Crawford County, for H. B. Fitchel, Denison, Iowa, on dirt road, concrete culvert and bridge construction: Dec. 1917-Dec. 1921

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County Engr., Franklin County, Hampton, Iowa, highway work, dirt and gravel road and concrete culvert design and construction, organization of construction and maintenance crews: at present student, Iowa State Coll. (Active practice 8.4 years: Res. Ch. 4). Refers to T. R. Agg, C. C. Coykendall, C. H. Currie, A. H. Fuller, C. S. Nichols, W. H. Root.

VIS, DONALD GORDON—78 Utica City National Bank Bldg., Utica, N. Y.—(Age 28. Born Utica, N. Y.) (C. E., Cornell Univ., 1917.)—June 1917 to March 1918 Foreman, Warren Bros. Co. of Boston, on street paving and road construction in Elmira, Endicott and Binghamton, N. Y.: May to Dec. 1918 Asst. Supervisor, E. I. DuPont Co., at smokeless powder plant, Carneys Point, N. J., in charge of magazine storage and shipping of smokeless powder, having charge of number of foremen, etc.: April to Dec. 1919 Foreman and later Asst. Supt., Warren Bros. Co., on street paving construction at Ithaca and Elmira, N. Y., and on state road construction at Sayre and Athens, Pa.: April 1920 to date member of firm acting as Gen. Supt., Municipal Constr. Co. of Utica, N. Y., construction of asphalt and concrete street and road paving and of other work, such as sewers, creek channels, etc. (about \$350 000 worth of work handled annually); has general charge of all company's construction work; occasionally assists engineers on design of streets, etc., recommending proposed mixtures, etc., for asphaltic types of construction; work also involves setting of asphalt mixtures at some points. (Active practice 4.9 years: Res. Ch. 4.9). Refers to R. S. Cunningham, J. A. Giles, A. L. LaRoche, E. H. Prentice, W. E. Weller.

CKER, DAVID ALEXANDER—1202 Matoaka St., Norfolk, Va.—(Age 38. Born Pine Bush, N. Y.) (B. S., 1906, and C. E., 1914, Rutgers Coll.)—July 1906 to March 1907 and Jan. to March 1908 Draftsman, Virginian Ry., at Norfolk, Va.: March to Dec. 1907 Transitman on location, Pensacola Northeastern Ry. Co., in Florida and Alabama, last 3 months Chf. of Party: March 1908 to March 1911 Chf. Engr., Title Guarantee & Trust Co., Norfolk, in charge of surveys and extensive map work in connection with Land Title Dept.: March 1911 to March 1917 Asst. City Engr., Norfolk, first in charge of developing, for street, sewer and water improvements, the old 9th and 10th Wards; then in charge of all construction work done under direction of City Engr., such as pavements, designing and constructing sewer systems, pumping stations, water distribution systems, concrete drains, making water supply investigation, with extensive surveys, etc.: March 1917 to Jan. 1918 associated with Gilbert C. White, Cons. Engr., Durham, N. C., in charge of street, sewer and water improvements, both design and construction, in various North Carolina towns and cities; installed \$100 000 sewer and water system at Beaufort, N. C., including difficult sewer construction, sewage collecting well electrically operated, tower, tank and deep well water system; designing street pavement and storm drainage at Washington, N. C. (estimated cost \$300 000); had charge of sheet asphalt pavement at Smithfield, N. C., and other smaller work in that section: Jan. 1918 to July 1920 Asst. City Engr. of Norfolk, in charge of water-supply work in connection with the Army and Navy Bases, also of sewers and storm water drains for the City, the former involving construction of large water mains, filter plant addition and electrical pumping units, also overhauling present City Water Works Station and preliminary work on New Water Supply: July 1920 to Dec. 1922 Engr. of Water and Sewers, Dept. of Public Works, Norfolk, in charge of water construction and sewer construction and maintenance; work included Lake Prince Project, involving dam, 20 miles of 36-in. pipe-line, three river crossings, filtration plant, two pumping stations; also remodeled the old Moore's Bridges Pumping Station (combined cost of this work \$4 800 000); had charge of design, construction of city water distribution mains, sanitary and storm water sewers and many other details of the department. (Active practice 16.6 years: Res. Ch. 15.1: Design 14.8). Refers to J. C. Carpenter, A. D. Estes, H. Fernstrom, F. F. Harrington, R. Messer, J. O. Miller, G. C. White.

ERRING, EARL WILLIAM—712 E. McCarty St., Jefferson City, Mo.—(Age 26. Born Chicago, Ill.) (B. S. in C. E., Univ. of Ill., 1918.)—June 1918 to March 1921 with Morgan Eng. Co., Memphis, Tenn., until May 1919 as Computer and Instrumentman on drainage and highway work; then Res. Engr. in charge of construction, Ozark Trail Road Dist. (contract price about \$160 000) and Black Oak Road Dist., Poinsett County, Ark. (contract price about \$35 000), heavy earth road construction (29 miles), concrete and steel bridges (total length 828 ft.) and two timber bridges (418 and 328 ft.): March to Oct. 1921 with L. R. Parmelee, Helena, Ark., as Res. Engr. on construction of concrete road, Helena-Ferguson Road Dist., Phillips County, Ark. (built 12 miles, cost

FOR ADMISSION

about \$250 000): Oct. 1921 to date with Missouri State Highway Comm., until Oct. 1922 as Project Engr. in charge of construction of gravel roads, bridges on State Aid and Federal Aid Projects (23 miles road, 240 ft. steel bridge, spans 180 ft. and 60 ft.) (total contracts \$109 000); since then Asst. Div. Engr., Div. No. 5, on location of roads, preparation of plans, assisting in supervision of construction; also had charge of laying experimental bituminous bridge floor covering for the department. (Active practice 4.5 years: Res. Ch. 3.6). Refers to H. E. Frech, L. L. Hidinger, H. H. Lotter, N. H. Sayford, H. A. Wiersema, R. G. Williams.

DELLA FAZIA, NICHOLAS—2224 Adams Pl., New York City—(Age 27. Born in Italy.) (B. S. in Civ. Eng., 1918, and C. E., 1921, Cooper Union)—June to Dec. 1918 student.

19 Coast Artillery School, Ft. Monroe, Va.; Master Gunner, 31st Regt. Coast Artillery, Camp Eustis, Va., surveying: Feb. 1919 to July 1921 with Alexander Potter, Cons. Engr., New

(1) York City, 9 months as Chf. Draftsman on sewer and water maps and design of sewers; 8 months Chf. Asst. Engr. in charge (with Res. Engr.) of branch office at Santiago de Cuba, on compilation of maps from field data, preparation of sewer, water and paving maps, design of sanitary sewers, storm drains and appurtenances for large Cuban cities; 9 months Asst. Engr. in New York office on continuation of Cuban work; office work on large water conservation project, filtration plans, distribution systems; 4 months Chf. Asst. Engr. in charge of New York office on sewer projects, sewage-disposal plant, design and construction of water distribution systems and reports: Aug. 1921 to date in private practice as Civ. Engr. and Surveyor, New York City, design and construction of retaining walls, swimming pool, city surveying, etc. (Active practice 4.2 years: Res. Ch. 2.5: Design 0.2). Refers to C. L. Bogert, A. Castillo y Grau, D. T. Pitkethly, A. Potter, E. F. Robinson.

DEPUY, AUGUSTUS BRIGHTLY—111 Washington Ave., Collingswood, N. J.—(Age 29. Born Camden, N. J.)—1916 completed C. E. course, International Correspondence School:

20 1911 to 1914 (3 years) with Louis Croxton, Belmar, N. J., as Transitman and Gen. Asst. on farm surveys, topographical maps, curb and sidewalk work and townsite layouts:

(4) 1914 to 1918 (4 years) with Remington & Vosbury, Cons. Engrs., Camden, N. J., as Asst. Engr. on design and construction of storm and sanitary sewers and disposal plants; Res. Engr. on sewer system and disposal plant at Bay Head, N. J., also city and topographical surveys and tax maps: 1918 to 1919 (1 year) Jun. Engr. (civilian), U. S. Engrs., Ancon, Canal Zone, Panama; Draftsman on military maps and plans connected with army work: 1919 to 1920 (1½ years) with Remington & Vosbury, as Asst. Engr. on design and construction of town pavements, storm sewers and resurfacing work; Res. Engr. in charge: 1920 to 1921 (6 months) Office Engr. on design of concrete wharves, retaining walls and piping systems for fire protection, Dept. of Public Works, Santo Domingo, Dominican Republic: 1921 to date (1½ years) with Remington & Vosbury as Res. Engr. on construction of town and city pavements, sheet asphalt and reinforced concrete, complete charge of work from design to completion of contracts. (Active practice 11.8 years: Res. Ch. 2.8: Design 4.3). Refers to H. N. Benkert, E. H. Maier, J. C. Remington, Jr., J. F. Sanborn, B. M. Schmucker, J. A. Williams, L. B. Woodruff.

DEY, BIRENDRA NATH—94 Kensington High St., London, W. 8, England—(Age 30. Born Calcutta, India.) (B. S. in Eng., Univ. of Glasgow, 1915.)—July 1912 to June

21 1913 Surveyor and Engr. designing and looking after construction of residence of Lala Baij Nath at Rikhikesh, India: April 1914 to Sept. 1915 Asst. Engr.

(1) Glasgow & South Western Ry., Glasgow, on construction and maintenance, designs, estimates, setting out, supervision on site: Oct. 1915 to Sept. 1916 Asst. Engr. Orr Watt & Co., The Lanarkshire Bridge Works, Motherwell, Scotland, on design and drawing of steel structures, bridges, etc., supervision in workshop of fabrication and building up of bridges and other structures: Sept. 1916 to April 1917 Lecturer in Eng. Technical Coll., West Hartlepool, England: April 1917 to date in private practice as Cons. Engr., London, England, on design of structures and engineering projects, detail drawings, supervision of construction operations, including design and supervision of construction of buildings, bridges, industrial structures, ships, etc., for Walter Jones & Sons, London (1917-1918, 1919-1920) and John ver Mehr, Contrs. to Admiralty (part of 1918) (total 3½ years); from April 1918 to March 1919 Chf. Engr., Peter Lind & Co., Westminster, design, drawing office, organization, management, progress systems for speeding up construction of reinforced concrete ships for the Admiralty: from Jan. 1921 to Dec. 1922 Cons. Engr. on installation of extensive gas works plant (£250 000) at Provan, Glasgow, for

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Corporation of City of Glasgow comprising ferro-concrete and steel structures, railways, drainage, water supply, conveyors and other handling plant, extensive pipe lines, valves, etc.; since Oct. 1921 also Director of International Engineers' Syndicate, technical advice and agency for equipment of industrial plant, scheme, design, specification, selection of machinery and plant, etc.; and Director of Economic Structures Co., London, design and supervision of construction. (Active practice 10 years: Res. Ch. 6: Design 6).

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WS. WILLIAM GREENE—Cedar Rapids, Iowa—(Age 58. Born in Clayton County, Iowa.)—1883 graduated from Shattuck Mil. School, Faribault, Minn.: 1883 to 1884 (1 year) Rodman and Instrumentman, and 1884 to 1886 (2 years) Constr. Engr., B. C. R. & N. Ry.: 1886 to 1887 (1 year) Contr., construction, Illinois Central R. R.: 1900 to 1904 (4 years) Supt. of Constr., Cedar Rapids & Iowa City Ry.: 1904 to July 1919 (15 years) Pres. and Gen. Mgr., and July 1919 to date Pres., C. R. & I. C. Ry. and Iowa Ry. & Light Co.: since 1900 has passed judgment on all designs for construction of both of these companies: Registered Professional Engr. of Iowa. (Active practice 26 years: Res. Ch. 25). Refers to W. G. Fargo, W. H. Finley, F. A. Macdonald, W. G. Raymond, J. D. Wardle.

HAZAROFF, JOHN BASIL—Pesotschnaya 5, Petrograd, Russia—(Age 29. Born Tiflis, Caucasus.) (E. E., Electrotechnical Inst., Petrograd, Russia, 1916.)—May to Aug. 1913 Apprentice in Transformer Test, Dynamo and Motor Test and Transformer Design Depts., Westinghouse Works, Manchester, England: May to June 1914 visited hydro-electric plants in Switzerland: 1914-1916 developing water power of Dnieper Rapids: May 1916 to date at Electrotechnical Inst., Petrograd, Russia, until March 1922 as Teacher (Asst. Prof.) on hydraulics, water turbines, water-power development and projects of hydro-electric stations; since then Prof. on hydro-electric power development: also, April 1917 to April 1918 Engr. on projecting of water-power developments for Board of Inner Waterways; April 1918 to date Engr. directing Svir River water-power development project to supply Petrograd with electrical energy; Dec. 1918 to Nov. 1920 Engr. directing projecting of hydraulic equipment and power-house design for Welhof Hydro-Electric Station. (Active practice 6.4 years: Res. Ch. 5.4: Design 1.2). (Applies in accordance with Sec. 1, Art. 1, of the By-Laws.)

ELFORD, HAROLD—307 E. Gay St., Columbus, Ohio—(Age 27. Born Chicago, Ill.) (B. C. E., Ohio State Univ., 1917.)—May to June 1917 Supt. of Constr. for E. Elford, Gen. Contr., on reinforced concrete warehouse: May 1918 to June 1919 1st Lieut., U. S. Engrs., division engineering work, repairing roads, repairing and maintaining railroads, erecting temporary buildings, etc.: June 1919 to date Gen. Supt. of Constr. for E. Elford, general building contracting and concrete bridge work. (Active practice 4.6 years: Res. Ch. 3.5). Refers to W. Braun, W. J. Camlin, J. H. Fleming, C. T. Morris, J. C. Prior.

SHMAN, HARRY ARTHUR—635 East 138th St., New York City—(Age 20. Born New York City.) (B. S. in C. E., Cooper Union, 1922.)—Refers to H. R. Codwise, F. E. Foss, G. Morrison, C. T. Schwarze, J. P. J. Williams.

XX. JAMES McCUTCHEON—542 West 112th St., New York City—(Age 23. Born New City.) (A. B., 1920, and C. E., 1922, Columbia Univ.)—July 1922 to date Steel Designer, Purdy & Henderson Co., New York City. (Active practice 0.5 year). Refers to A. H. Beyer, J. K. Finch, A. L. Kehoe, W. J. Krefeld, E. B. Lovell, H. V. Spurr.

ANGADHARAM MOODIAR, LALLAPET—6085 Regimental Bazar, Secunderabad Cantt., India.—(Age 24. Born Nizamabad, India.)—Graduated from Govt. School of Eng., Hyderabad State, India, in 1921, and received degree of B. E. (Civ.) of The National Univ.: July to Aug. 1921 Engr.'s Asst., Chf. Engr. and Secy. to Govt., Gen. Branch, Public Works Dept., scrutiny of plans and estimates of buildings, roads and bridges and design of steel centring: Aug. 1921 to date Sub-Party Officer, T. R. surveys, Chf. Engr. and Secy. to Govt., Irrigation Branch, Public Works Dept., investigation and selection of sites for dams, storage reservoirs, canals, etc., and directing the detail surveys. (Active practice 1.3 years: Res. Ch. 0.7: Design 0.7). (Applies in accordance with Sec. 1, Art. 1, of the By-Laws.)

FOR ADMISSION

GARDINER, JOHN HAINES—Box 274, University Station, Tucson, Ariz.—(Age 28. Born Philadelphia, Pa.) (B. S. in E. E., Univ. of Ariz., 1918.)—June to Aug. 1917 Computer 28 Arizona Eastern R. R., Eng. Offices, Tucson: 1917 to 1919 student and overseas service: Aug. 1919 to June 1920 Field Engr.-Constr. Engr., Edwin R. Post Co., Tucson, on (11) 25 000-acre irrigation project; Instrumentman and in charge of engineering construction, locating canals, topography and traverses; installation of concrete structures, river siphons and intakes; in charge of party: June to Sept. 1920 Transitman and Asst., Pima County (Ariz.) Highway Comm., on road construction, installing concrete structures, design of reinforced concrete bridges and structures from standard: Sept. 1920 to Feb. 1921 Leveler, Tucson, Cornelia & Gila Bend R. R., Arizona: April 1921 to date Jun. Engr. and Asst. to Dist. Engr., U. S. Geological Survey, W. R. Branch, on computations of river flow, stream gauging, in charge of construction of gauging cable, field investigation of irrigation systems, office work. (Active practice 3.2 years). Refers to J. C. Hoyt, F. B. Kendall, J. C. McClure, R. C. Rice, G. E. P. Smith.

GIBSON, ROBERT CLAYTON—Arkadelphia, Ark.—(Age 28. Born West Point, Miss.) (B. E. in Civ. Eng., Univ. of Miss., 1916.)—June to Sept. 1913 Draftsman with W. E. 29 Schmidt, Archt., Memphis, Tenn.: Sept. 1913 to Jan. 1914 Axeman and Rodman, U. S. Engr. Office, Memphis, on levee construction: Jan. to Sept. 1914 Rodman and Levee (14) Inspector, St. Francis Levee Dist. of Arkansas, on levee construction: July to Oct. 1915 Levee Inspector, Cotton Belt Levee Dist. of Arkansas, on levee construction: June 1916 to Jan. 1917 Transitman with Walter G. Kirkpatrick, Civ. Engr., Birmingham, Ala., in charge of field parties on preliminary surveys for gravel roads in Mississippi: Jan. to Aug. 1917 Res. Engr. on construction of 40 miles of gravel roads, Madison County, Miss., and of street paving and storm sewers, Canton, Miss.: Dec. 1917 to March 1918 Draftsman in Office of Const. Q. M., Camp Fremont, Cal., on layout maps and plans for camp sewer system, lighting and water systems, etc.: Feb. to July 1919 Draftsman, Tennessee Coal, Iron & R. R. Co., Land Dept., Birmingham, Ala., mapping coal mine workings: Aug. 1919 to April 1921 Prin. Asst. Engr. with Richardson Ayres, Civ. Engr., Hope, Ark., on plans for and construction of 37 miles of gravel roads, Hempstead County, Ark.: April to Aug. 1921 under direction of Arkansas State Highway Dept. on Federal Aid plans and bridge layouts for 47 miles of gravel roads, Clark County, Ark.: Aug. 1921 to date Asst. Engr. in charge of highways, Clark County Road Improvement Dist. No. 1, on construction of 47 miles of Federal Aid roads with eleven steel bridges, also surveys, plans and estimates for 22 miles of gravel roads in addition to the 47 miles. (Active practice 6.5 years: Res. Ch. 4: Design 0.7). Refers to J. H. Ayres, F. A. Gerig, W. Gerig, W. G. Kirkpatrick, D. F. McLeod, E. P. Shuman, G. H. Sykes.

GREELY, JAMES CECIL—Mabelle, Tex.—(Age 37. Born Maine Prairie, Minn.)—1903 to 30 and location, Great Northern Ry. Co., Seattle, Wash.: 1905 to 1906 (6 months) Rodman, Chicago, Milwaukee & St. Paul Ry. Co.: 1906 to 1908 (2½ years) Rodman and (15) Inspector, G. N. Ry. Co., maintenance of way, replacing pile bridge piers with concrete, and construction in British Columbia: 1908 (3 months) Topographer, Spokane, Inland Empire Ry. Co., Spokane: 1909 to 1910 (1½ years) Transitman and Levelman, Oregon, Washington Ry. & Navigation Co., Seattle, construction: 1910 to 1911 proving up on homestead at Ft. Benton, Mont.: 1911 to 1915 (3½ years) Inspector, U. S. Engr. Dept., Seattle, on river and harbor improvement, consisting of brush and rock jetties, channel excavation at Bellingham, Everett, Port Hadlock, Raymond and in Seattle on Lake Washington Canal: 1915 to 1922 (7½ years) with Puget Sound Bridge & Dredging Co., Seattle, as Foreman on shore work and Supt. in charge on channel excavation, sanitary and street fills, rock riprap on filled and dredged slopes; Supt. at Victoria, B. C., on back-filling concrete dock with 20-in. suction dredge, fill at Everett, Wash., for Norway Pacific Drydock & Constr. Co. Shipyard, sanitary fill at Astoria, Ore., for Sanitary and Reclamation Dist. No. 3, channel excavation and property fill also rock rip on slopes for Puget Mill Co. at Port Gamble, Wash., fill and riprap for Todd Drydock Co. at present plant in Seattle, and same for Gen. Petroleum Co.; also handled finances for the Company on joint work with Union Bridge Co. of Portland, Ore., on construction of Pasco-Kenniwick Highway Bridge (1922), numerous other small jobs, and construction of concrete dam at Oswego, Ore., for Oregon Iron & Steel Co.; at present Supt. on construction of 1 300 000 cu. yd. earth dam with 20-in. suction dredge at Mabelle, Tex. (Active practice 17.7 years: Res. Ch. 9). Refers to H. J. M. Baker, S. H. Hedges, J. B. C. Lockwood, R. E. Miller, O. A. Piper.

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DE. JOHN HALLWARD—34 Strathmore Ave. (Hamilton), Baltimore, Md.—(Age 37. Born Park Ridge, Ill.)—2 years student, Univ. of Wisconsin: April 1905 to April 1908 with Chicago & North Western Ry., Chicago, until Feb. 1907 successively as Tapeman, Rodman, Inspector, Draftsman and Instrumentman on maintenance and construction; then Draftsman in Bridge Dept. and Office of Terminal Engr., on design of bridge substructures, retaining walls, falsework, track elevation and general bridge drafting: April 1908 to Aug. 1909 Field Inspector, materials, workmanship and accounts, reconstruction Chicago street railways, also Tie Inspector at mills in Louisiana and Mississippi for Board of Supervy. Engrs., Chicago Traction: Aug. 1909 to Oct. 1911 Asst. Div. Engr. C. & N. W. Ry., Chicago, on design and estimates of railway structures, water supply, track work, etc., supervision of erection of bridges, buildings, yards, investigations and reports: Oct. 1911 to July 1914 Div. Engr., Canadian Northern Ry., Constr. Dept.; appraisal for Minn. R. R. Comm. of lines of this Company in Minnesota (\$8 000 000); in charge of 40-mile division of new construction, main line, yards, terminals, interlocking plants, etc., of D. W. & P. Ry., Virginia, Minn.: July 1914 to Jan. 1917 Sales Engr., building materials, insulating materials, etc.; Mnfr., organized and managed Hande Chemical Works at Chicago: Jan. 1917 to date with Baltimore & Ohio R. R. as follows: Jan. 1917 to Aug. 1918 Asst. Pilot Engr., Field Representative on valuation of Chicago Terminal, Valuation Committee cost studies, etc.; Aug. 1918 to July 1919 Special Engr. with Chf. Engr., Western Lines, at Cincinnati, Ohio, special investigations and reports, preparation of construction budgets, organization work, etc.; July 1919 to Jan. 1921 Improvement Engr., analysis of R. & E. expenditures during Federal control, and preparation of claims vs. Director General; since Jan. 1921 Accounting Engr., at Baltimore, Md., in charge of special department of expert accountants and engineers; audits and reports, principal work at present special audit of B. & O.'s investment account (\$800 000 000). (**Active practice 15 years: Res. Ch. 10.2: Design 6.**) Refers to J. H. Bowditch, J. B. Jenkins, E. G. Lane, J. L. Pickles, H. R. Talcott.

NOVER, CLINTON DEWITT, Jr.—113 Church St., New Haven, Conn.—(Age 21. Born Groton, Conn.) (B. S., Sheffield Sci. School, 1922)—Summers 1921 and 1922 (total 6 months) Draftsman, Ponemah Mills, Taftville, Conn.: Sept. 1922 Instructor in surveying, Sheffield Sci. School: Oct. 1922 to date Draftsman with E. W. Wiggin, Cons. Engr., New Haven, Conn. (**Active practice 0.5 year**). Refers to S. E. Barney, P. G. Laurson, S. B. Palmer, J. C. Tracy, E. W. Wiggin.

ERRIS, CHARLES CASPER—622 West 23d St., Oklahoma City, Okla.—(Age 44. Born Painesville, Ohio.)—Jan. 1898 to Aug. 1903 Rodman (3 months), Leveler and Instrumentman (2 years) and Asst. Engr. on construction (over 3½ years), Lake Shore & Michigan Southern Ry.: Aug. 1903 to Jan. 1904 Asst. Engr. on preliminary surveys, Lisbon Bridge, Erie Ry.: Jan. to Dec. 1904 Asst. Engr. and Topographical Engr. on preliminary and location, Lake Erie & Pittsburgh Ry., from Lorain to Youngstown: Feb. 1905 to Aug. 1906 Asst. Engr. on preliminary surveys, Peabody Coal Co., in Illinois (3 months); Asst. Engr. on construction and extension, C. & I. M. Ry. (formerly Pawnee Ry., owned by Peabody Coal Co.) (1½ years): Aug. 1906 to Dec. 1908 Asst. Engr. on preliminary surveys and locations, Virginian Ry. Co., in Ohio (1 year); Asst. Engr. on construction, Roanoke & Lurich, Virginia (nearly 1½ years): March 1909 to April 1910 Asst. Engr., Denver Reservoir Irrigation Co., on preliminary construction work: April 1910 to Feb. 1912 Asst. Engr., Idaho Irrigation Co., on irrigable surveys: Feb. 1912 to Aug. 1913 Asst. Engr., Porto Rico Irrigation Service, Dept. of Interior, on irrigable and lateral surveys: Aug. 1913 to April 1917 in private practice at Painesville, Ohio, land surveys, estimates on municipal work and allotments: Nov. 1916 elected County Engr., Lake County, Ohio: April 1917 to Sept. 1919 Res. Engr., Ohio State Highway Dept.: Sept. 1919 to date contracting and engineering, Buckeye Rubber Products Co., Willoughby, Ohio (1 year); Cons. Engr., Fairport, Ohio (1½ years); Cons. Engr., Healdton, Seminole, Blanchard, Maysville, Okarche, Waurika and several other towns and cities in Oklahoma (over 1 year). (**Active practice 24.8 years: Res. Ch. 22.6: Design 5.5.**) Refers to J. W. Beardsley, E. C. Blosser, W. P. Brown, M. C. Cleveland, H. Fernstrom, W. L. Gorton, A. N. Johnson, M. R. Kays, I. W. McConnell, K. H. Osborn, S. Rockwell, G. B. Stone, A. C. Toner, W. J. Watson, M. A. Zook.

ERRIS, MILTON—Care, Div. Engr., S. P. Co., Sacramento, Cal.—(Age 26. Born The Dalles, Ore.) (B. S., Ore. State Agri. Coll., 1917.)—1916 to 1917 (1 year) Draftsman, Oregon State Agricultural Coll., on maps of campus and plans of buildings; also Instructor in surveying and hydraulics: May to Aug. 1917 Instrumentman on highway

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(12) location, Oregon State Highway Comm.: Aug. 1917 to Nov. 1919 with U. S. Army, at Officers' Training Camp (Aug.-Dec. 1917), commissioned 2d Lieut., 9th Field Artillery, 1920 became 1st Lieut., F. A.; in charge of battery practically entire time; Graduate School of Fire, Ft. Sill and Ordnance Motor Instruction School, Raritan Arsenal, N. J., in charge all motor equipment and Instructor in motors and mapping: Nov. 1919 to June 1920 Asst., Valuation Dept., Southern Pacific Co., Portland, Ore., making up returns to Interstate Commerce Comm. Order No. 3: June 1920 to Jan. 1921 member of firm, Thomas, Harris & Thomas, Engrs. especially on topographic and railroad location engineering work, in charge of office and drafting room: Sept. 1920 to date with Southern Pacific Co., 2 years as Draftsman and Instrumentman, Portland Div., on similar work as from June 1920 to Jan. 1921 also design in connection with track layouts and general maintenance-of-way work, in charge of drawing up legal descriptions; designed several yard layouts; since Sept. 1922 Asst. Engr., Sacramento Div., in charge of design and field work, water supply investigations and snow sheds over Sierra Nevada Mts. **(Active practice 6.7 years: Res. Ch. 2.5: Design 2.2).** Refers to G. Haselton, O. Laurgaard, C. B. McCullough, C. Maughmer, O. E. Stanley, E. C. Thomas.

HAUSMAN, ISAAC—Care, The Bldg. Products Co., Toledo, Ohio—(Age 33. Born in Russia.) (S. B., Mass. Inst. Tech., 1911.)—June 1907 to Feb. 1908 Chainman, Union Pacific R. R.:

35 March to Oct. 1908 and May to Oct. 1911 Timekeeper, Cost Clerk and Engr. for C. M. Bolton & Co., Tunnel Contrs., Garrison, Mont., and Millwood, N. Y.: Nov. 1911 to March

39 1912 Structural Detailer with Post & McCord, New York City: March to Sept. 1912 Checker and Squad Boss, Geo. A. Just & Co., Long Island City, N. Y.: Sept. 1912 to Sept. 1914 Detailer, Designer, Checker and Squad Boss, Toledo (Ohio) Bridge & Crane Co.: March 1915 to date Designer, Estimator, Contr. Engr. and Mgr., The Bldg. Products Co., Toledo, Structural Engrs., and building materials. **(Active practice 12.5 years: Res. Ch. 9.2: Design 9.2).** Refers to N. F. Amburseen, W. J. Camlin, C. S. Carroll, J. Hoffman, C. O. Lasley, H. C. McClure, R. C. Reese.

HEPBURN, GEORGE HUNT—Cia. de Real del Monte y Pachuca, Necaxa, Puebla, Mexico—(Age 41. Born Philadelphia, Pa.)—May 1900 to Sept. 1901 Draftsman, Chefe de Servicios

36 Diversos, Usina Wigg, Miguel Brunier, Minas Geraes, Brazil, on design of mine structures; in charge of construction of mine structures, machinery installations, etc.: Jan. 1902 to Sept. 1904 Mine Surveyor, La Fovorita Mine, Bajan, Coah., Mexico: Dec. 1904

to April 1906 Asst. Supt., Supt., Hidalgo Placer Mining & Milling Co., Parral, Chih., Mexico, opening up and developing copper mine: May 1906 to April 1907 Mill Supt., Mexican Mines Syndicate, Cusluiirachie, Chih., Mexico, silver concentrating mill: Oct. 1907 to June 1908 Transitman, Madeira-Mamoré Ry., Porto Velho, Amazonas, Brazil: Feb. to May 1909 Transitman, Parsons Pulp & Lumber Co., Saltville, Va., on railway preliminary and location surveys: June to Dec. 1909 Instrumentman, Acting Res. Engr., Key West Extension, Florida East Coast Ry., Marathon, Fla., on construction: Aug. 1910 to April 1913 Instrumentman, Acting Res. Engr., Connellsburg Extension, Western Maryland Ry., Cumberland, Md., railway and engine terminal construction: Nov. 1913 to March 1914 reconnaissance and investigation of resources of Beni River, Bolivia, for proposed company to market valuable woods of that region: April 1914 to June 1920 Chf. Engr., Empresa George Wilson, Oruro, Bolivia, on railway construction and mine operations: July 1920 to Jan. 1921 Chf. Engr., Guggenheim Bros., La Paz, Bolivia, surface and underground surveys, highway construction, etc., at tin mine developments: April 1922 to date Asst. Supt., Cia. de Real del Monte y Pachuca, Necaxa, Puebla, Mexico, driving and lining 3 800-m. pressure tunnel for hydro-electric development. **(Active practice 18.3 years: Res. Ch. 11.8: Design 1.4).** Refers to J. G. Hollman, H. M. Matthews, J. C. Patterson, W. K. Runyon, T. D. Sawyer, P. A. Seibert.

HILLIARD, ARTHUR EUGENE—Allaben, N. Y.—(Age 25. Born Franklinville, N. J.) (B. Sc., Rutgers Coll., 1921.)—April 1922 to date Rodman, Board of Water Supply of

37 New York City, inspection of concrete at mixer, line and grade party and drafting in division office. **(Active practice 0.6 year).** Refers to S. K. Clapp, M. H. Freeman.

33 R. W. Gausmann, C. G. Hoerner, Jr., G. G. Honness, L. F. Searle, S. A. Stephenson, Jr.

HILTON, JOSEPH KENNICOTT—Clarion, Iowa—(Age 36. Born Mt. Savage, Md.)—Student, State Univ. of Iowa and Northwestern Univ., completing 1 year in Liberal Arts and

38 3 years in Engineering: June to Sept. 1909 Draftsman for C. C. Stowell, C. E., Rockford, Ill., detail drawing on concrete factory construction, inspection and testing materials:

37 June 1911 to Jan. 1912 with Dept. of Public Works, Evanston, Ill., on inspection of

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paving construction and testing of materials: July 1912 to March 1914 Rodman (4 months), Draftsman in Chf. Engr.'s office (4 months) and Bridge Inspector on construction in Iowa (1 year), Chicago & Northwestern R. R.: March 1914 to May 1915 Asst. County Engr., Crawford County, Iowa, made road and bridge surveys and plans and in direct charge of construction: May to July 1915 Asst. County Engr., Sac County, Iowa, on road and bridge surveys and plans: July 1915 to March 1916 with S. J. Nelson, Drainage Engr., Jefferson, Iowa, on preliminary surveys and plans of county drainage districts: March 1916 to March 1919 Asst. County Engr., Sac County, made preliminary surveys and had charge (under County Engr.) of construction of 80 miles of road system: March 1919 to date County Engr., Wright County, Iowa, designed and superintended construction of the road system (120 miles) and built 300 concrete bridges and culverts, and Res. Engr. for the State on all State work in the county (3 projects). (Active practice 11.1 years: Res. Ch. 8.6: Design 8.6). Refers to J. H. Ames, C. Covkendall, C. H. Currie, W. D. Maxwell, J. F. Reynolds, W. H. Root.

EDS. JULIAN—Wilds Bldg., Denver, Colo. (Age 41. Born Warrenton, Ala.) (C. E., Univ. of Tex., 1908.)—June to Sept. 1906 Rodman and Block Signal Repairman, Southern Pacific Ry., Houston, Tex.: Sept. 1906 to June 1909 at Univ. of Texas, until June 1908 as Asst. Instructor in drawing, then Instructor in Civ. Eng. and Drawing in charge of all first year drawing and surveying; also taught descriptive geometry: June to Aug. 1909 Transitman, Gulf, Texas & Western Ry., Jacksboro, Tex., townsite surveying and concrete inspection: Aug. 1909 to June 1910 Designer of reinforced concrete and steel bridges, Chicago, Milwaukee & St. Paul Ry., Chicago: June 1910 to date with U. S. Reclamation Service as follows: June 1910 to Jan. 1912 Surveyman and Jun. Engr. at Sunnyside, Wash., on design of irrigation structures; Jan. 1912 to June 1915 Jun. Engr. and Asst. Engr. at Elephant Butte, N. Mex., on design of construction plant, cement mill and minor features of dam; June 1915 to April 1917 Asst. Engr. at Denver, Colo., on general design of irrigation structures and works; since April 1917 Asst. Engr. and Engr. at Denver; Chf. Draftsman and Asst. to Designing Engr., in direct and responsible charge of drafting and designing on dams and all kinds of irrigation works. (Active practice 13.7 years: Res. Ch. 6.3; Design 10.9.) Refers to A. P. Davis, J. Munn, O. T. Reedy, J. L. Savage, R. F. Walter, F. E. Weymouth, C. P. Williams.

PFEN, BERNARD—3023 Eastchester Road, Bronx, New York City—(Age 27. Born Kielce, Russia.)—1917 received certificate from Univ. of Edinburgh: March to Oct. 1917 Asst. Engr., Balfour Beatty & Co., Edinburgh, Scotland, on excavation and supervision at Port Rosyth, Edinburgh: Nov. 1917 to Dec. 1918 Civ. Engr. to Provisional Constr. Dept., Moscow: Jan. 1919 to Aug. 1921 Asst. to Production Engr. on reconstruction of burned roof, Mercury Mechanical Shoe Factory, Riga, Sassinghof: Oct. 1921 to Nov. 1922 Estimator on machine switching, The Western Elec. Co., New York City. **(Active practice 4.3 years: Res. Ch. 2.5: Design 1.8.)** Refers to W. E. Brown, H. R. Codwise, F. E. Foss, G. Morrison, J. P. J. Williams.

TCHINSON, HAROLD, SPENCER—117 Jamaica Ave., Flushing, N. Y.—(Age 27. Born Flushing, N. Y.) (C. E., Lehigh Univ., 1922.)—April 1918 to May 1919 in France with 304th Field Artillery, Battery Commander's Detail, on range finding, setting guns, etc.: May to June 1919 Draftsman with Post & McCord, New York City: July 1919 to April 1920 Timekeeper and Material Clerk, Robbins Ripley Co., New York City: April to Oct. 1920 Salesman of building material, Sheet Lathing Corporation, Syracuse, N. Y.: Oct. 1920-Oct. 1922 Civ. Engr. and Asst. Field Mgr., Bed Rock Petroleum Co., New London, Conn., in charge of surveying work, experimental work in regard to petroleum engineering, as Asst. to Field Mgr. had charge of construction of pumping power plants, etc. (**Active practice 3.5 years: Res. Ch. 1.5.**) Refers to W. R. Abbot, W. S. Babcock, F. P. McKibben, J. W. Ripley, J. Upton.

DOW, ROBERT JOHN—151 West 51st St., Los Angeles, Cal.—(Age 23. Born Vining, Kans.) (B. S. in C. E., Univ. of Cal., 1922.)—April to Aug. 1919 Chairman, City of Los Angeles, penstock and power-house survey: May to Aug. 1920 Draftsman, and June to Aug. 1921 Concrete Foreman on building construction with Witmer & Watson, Architects, and Engrs.: 1920 to 1921 (while at college, total 1 year) Draftsman, Bake-Rite Oven Mfg. Co., San Francisco, on various kinds of work, principally mechanical: June 1922 to date with Bureau of Power and Light, Los Angeles, as Structural Drafts-

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man, power-house design, and Inspector on pile driving. (**Active practice 0.5 year: Res. Ch. 0.3: Design 0.4**). Refers to R. E. Davis, C. Derleth, Jr., B. A. Etcheverry, F. S. Foote, S. T. Harding, C. G. Hyde.

KIRKHAM, HERBERT MARKEY—1001 Century Bldg., Pittsburgh, Pa.—(Age 31. Born Cincinnati, Ohio.) (B. S. in C. E., Ohio Northern Univ., 1913.)—Sept. 1913 to March 43 1914 Chainman and Inspector, also instrument work, Pennsylvania R. R., Bldg. Dept., Pittsburgh, Pa., on construction of large freight station, concrete abutments, piers.

(6) retaining walls and concrete piles: Aug. 1914 to Jan. 1917 Rodman, Instrumentman and Computer, Interstate Commerce Comm., railroad valuation, Southern Dist.: Jan. to May 1917 Computer, Florida East Coast Ry., St. Augustine, Fla., Valuation Dept.: May to Dec. 1917 Computer, Minneapolis, St. Paul & Sault Ste. Marie Ry., Valuation Dept.: Dec. 1917 to Oct. 1918 Sgt., Intelligence Sec., 88th Div., U. S. Army, in charge of drafting and mapping; Instructor in mapping and drafting, Camp Dodge (until Aug. 1918), then with A. E. F.: Oct. 1918 to June 1919 with U. S. Army Engrs., A. E. F., Master Engr., Senior Grade, 88th Div., in charge of Topographical Sec., Intelligence Sec., responsible for battle and division maps, etc.: July 1919 to May 1922 Res. Engr., Illinois State Highway Dept., highway and bridge construction, in charge during construction season of grading, paving, bridge construction, Federal Aid roads: May 1922 to date on supervision of construction, with Rutan, Russell & Wood, Archts., and Engrs. (**Active practice 8.9 years: Res. Ch. 3.3: Design 0.5**). Refers to G. F. Burch, C. M. Hathaway, C. J. H. Moritz, H. Puckett, A. W. Wand.

KLUPT, ALEXANDER ELIHU—9404 Seventy-seventh St., Woodhaven, N. Y.—(Age 26. Born New York City.) (C. E., Columbia Univ., 1917.)—June to Aug. 1917 Jun. Asst.

44 1917 Engr., Public Service Comm., 1st Dist., New York City; Instrumentman: Aug. 1917 to Jan. 1918 Asst. Engr. with Smith, Hauser & McIsaac, Inc., supervising laying of about (1) 10 miles of sewer pipe and steam heat returns, at Camp Meade, Md., Imhoff tanks included in sewerage system, inspection of construction: Jan. to May 1918 Draftsman and Gen. Asst. to Borden B. Harris, Cons. Engr. and Associate to F. A. Molitor, on railroad valuation reports, also special problems of maintenance and improvement, etc., for railroad: May to Nov. 1918 Draftsman and Engr., Torcrete Shipbuilding Corporation, design and detail (under supervision) of reinforced concrete oil tank barge of novel design and construction, some field supervision of construction: Nov. 1918 to April 1919 Asst. Engr. and Designer with Ford, Bacon & Davis, Inc., in responsible charge of design in connection with design and detailing of warehouses and connecting bridges to wharf house, New Orleans Army Supply Base, reinforced concrete and structural steel, also field: May 1919 to Jan. 1921 Engr., Truscon Steel Co., in responsible charge of estimating, designing, detailing of all types of reinforced concrete buildings, from small garage and residence to large industrial buildings, hotel and educational centers in New York City and Norfolk, Va.: Feb. 1921 to date miscellaneous private work for architects, engineers and builders, including design of frame dwellings, design in concrete, surveying, also real estate brokerage. (**Active practice 5.5 years: Res. Ch. 4.4: Design 3.6**). Refers to W. H. Burr, L. M. Davis, B. B. Harris, E. B. Lovell, J. C. McCarthy, F. J. Trelease.

KLYCE, WILLIAM HENRY, Jr.—1012 Baltimore Ave., Kansas City, Mo.—(Age 30. Born Dickson, Tenn.) (B. E., Vanderbilt Univ., 1912.)—July 1912 to Feb. 1914 Draftsman.

45 1914 Designer, Estimator and Salesman, Nashville (Tenn.) Bridge Co.: Feb. 1914 to Jan. 1915 maintenance-of-way standards, water supply, Nashville, Chattanooga & St. Louis (14) R. R., Nashville: Jan. 1915 to Jan. 1917 member of firm, Freeland-Klyce Eng. Co. Structural Engrs., Nashville: Jan. to Nov. 1917 Chf. Engr., Cardem Process Co., New York City, waste heat drying of industrial liquors: Nov. 1917 to Feb. 1919 2d Lieut. Air Service, U. S. Army, Instructor in flying; Officer in Chg. engine repair shop; student in airplane design, Massachusetts Inst. of Technology: Feb. to Oct. 1919 member of firm, Klyce-Rooney Aircraft Co., New York City, on design, construction and flight of new type flying-boat: Jan. 1920 to June 1921 Secy. and Treas., D. Y. Johnson Cut Stone Co., Nashville: June 1921 to Nov. 1922 private work, miscellaneous engineering, working up plan for river barge line and terminals, some structural design and bridge design, at Nashville: Nov. 1922 to date Bridge Designer with Harrington, Howard & Ash, Kansas City, Mo. (**Active practice 10.3 years: Res. Ch. 6.9: Design 6.4**). Refers to L. R. Ash, F. M. Cortelyou, A. J. Dyer, F. E. Freeland, J. L. Harrington, H. McDonald, H. C. Tammen, C. B. Wilson.

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eld, H. C.

MAN, MENASHAH—30 West 127th St., New York City—(Age 31. Born in Russia.) (B. S. in Civ. Eng., Univ. of Mich., 1919.)—July to Oct. 1919 Structural Draftsman, Burrell Eng. Co., Chicago, Ill.: Oct. 1919 to March 1920 Structural Draftsman and Designer, Armour & Co., Chicago: March to Dec. 1920 Structural Draftsman and Designer, Leonard Constr. Co., Chicago: April 1922 to date Structural Draftsman and Designer, American Concrete Steel Co., Newark, N. J. (**Active practice 2.2 years: Design 2.2.**) Refers to J. H. Cissel, A. J. Decker, E. C. Epple, L. M. Gram, H. E. Riggs.

TEGER, HERMAN JOHN—191 Sherman Ave., Jersey City, N. J.—(Age 26. Born Newark, N. J.)—Sept. 1914-1917 and since 1919 student, night course in Civ. Eng., Cooper Union, New York City: Dec. 1917 to June 1919 Corporal, 25th Regt., U. S. Engrs.; from March to May 1918 on St. Sulpice Storage Project, France, checking material and making progress reports; June to Sept. 1918 at La Pallice Depot, France, in charge (under supervision of Lt. R. S. Tilden, 25th Engrs.), of construction materials and distribution for cantonment and other projects in the vicinity; Sept. 1918 to Jan. 1919 in Argonne Forest, Field engineering work in war zone, in charge of materials for relief quarters at Montfaucon, also of men and materials on detached service constructing wooden frame buildings at Chattencourt and Dun sur Meuse; prison camps at Marc d'Varennes under supervision of Capt. Tilden; Jan. to May 1919 at Camp Pontanezen, Brest, railroad work, in charge of labor detail laying narrow-gauge track; Chf. Draftsman, Pontanezen R. R.; June 1919 to date Asst., Bridge and Bldg. Dept., U. S. Steel Products Co., New York City, contracting engineering; associated with designing, estimating and contracting for fabricated structural steel, such as bridges, buildings, tanks, towers, etc., for export (department handles exclusively for export the products as manufactured by American Bridge Co.). (**Active practice 4.7 years: Res. Ch. 4.4.**) Refers to W. G. Grove, J. W. Hamilton, O. E. Hovey, P. Smith, J. E. Wadsworth, J. P. J. Williams.

T. RICHARD PERKINS—P. O. Box 81, Henderson, N. C.—(Age 31. Born Highland, N. Y. (B. E., Union Univ., Schenectady, N. Y., 1913.)—June to Aug. 1913 County Highway Inspector, Ulster County, N. Y., inspecting brick paving construction: Aug. to Nov. 1913 Inspector of Public Works, Schenectady, N. Y., inspecting paving and building construction: Nov. 1913 to April 1914 Instrumentman on dock construction, Poughkeepsie, N. Y., figuring estimates, setting grades, and pile design and general inspection: April 1914 to April 1915 Rodman, New York State Highway Comm., setting grades, working estimates and inspecting road construction, and April 1915 to Sept. 1917 Jun. Asst. Engr. in charge of construction of all types of road work: Sept. 1917 to Sept. 1918 2d Lieut., and Sept. 1918-July 1919 1st Lieut., Engrs., U. S. Army, about 1 year commanding company: Aug. 1919 to June 1922 Asst. Engr., New York State Highway Comm., in charge of construction: June 1922 to date Res. Engr. with R. D. Gladding, Wilson, N. C., in responsible charge of municipal construction, until Aug. 1922 at Oxford, N. C., and since then at Henderson, N. C. (**Active practice 8.9 years: Res. Ch. 6.7: Design 1.2.**) Refers to H. E. Breed, R. D. Gladding, O. H. Landreth, C. F. Morse, J. H. Sturdevant, B. H. Wait, L. Walzer.

WIS, DUDLEY LELAND—City Hall, Ft. Worth, Tex.—(Age 37. Born Terry, Miss.) (B. S. Miss. A. and M. Coll., 1906; C. E., Cornell Univ., 1908.)—July 1908 to Nov. 1909 Instrumentman, New Orleans Great Northern Ry. Co.: Nov. 1909 to May 1911 Res. Engr., The Fred A. Jones Co., Dallas, Tex., on construction of White Rock reservoir for water supply: Sept. to Dec. 1911 Levelman, U. S. Govt. Survey, Shreveport, La.: Feb. 1912 to date Engr. (5 years) and City Engr. (past 5 years), Ft. Worth, Tex., on supervision and direction of engineering and construction. (**Active practice 13.9 years: Res. Ch. 10.7: Design 2.9.**) Refers to H. B. Friedman, R. V. Glenn, J. H. Gregory, J. B. Hawley, J. Mead, E. E. Sands, F. J. Von Zuben.

E. ALEXANDER—61 West 50th St., New York City—(Age 31. Born New York City.) (C. E., Cornell Univ., 1913.)—July 1913 to July 1914 Asst. Engr., O'Rourke Eng. Constr. Co., in field office designing plant structures and layout, methods of construction, etc., for foundation work of Equitable Bldg., New York City: July 1914 to March 1917 Asst. Engr., Flinn-O'Rourke Co., in main office designing plant structures, methods of construction, underpinning, etc., with some field supervision on Clark St. and Montague St. East River Subway Tunnels and their subway approaches: March to Aug. 1917 and Dec. 1918 to Oct. 1919 Field Engr. and Asst. Supt. for Booth & Flinn, Ltd., supervising

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top labor gangs and on field engineering work for contractors on 14th St. East River Subway Tunnel: Aug. 1917 to Dec. 1918 with U. S. Army, at Second Officers' Training Camp as 1st Lieut. in Coast Artillery Corps; later Capt. and finally Major: Jan. to March 1920 and Jan. to March 1922 Concrete Designer, Dwight P. Robinson Co., designing miscellaneous reinforced concrete for apartment and industrial buildings and hydroelectric power plants: April to July 1920 Concrete Designer, H. D. Best & Co., designing miscellaneous reinforced concrete for industrial buildings and garages: Aug. 1920 to May 1921 Asst. Supt. of Yard Dept., Scovill Mfg. Co., in charge of all new construction and supervising repair and maintenance work throughout the factory: June to Dec. 1921 Supt., Clark Constr. Co., supervising miscellaneous building and general construction work, soliciting business and estimating new projects: Oct. to Nov. 1921 (nights) Structural Engr. designing 1-story brick, steel and concrete garage (approx. cost \$25 000) for Dr. Geo. W. Russell: Dec. 1921 to Jan. 1922 Structural Engr. designing 3-story brick and steel factory addition (approx. cost \$100 000) for Fred A. Webster, Archt.: March 1922 to date Res. Engr., Booth & Flinn, Ltd., in charge of all field engineering work for contractors on Hudson River Vehicular Tunnel between New York City and Jersey City; also supervised construction of New York Power Plant and placing of the clay blankets. **(Active practice 9.5 years: Res. Ch. 5.8: Design 6).** Refers to M. E. Chamberlain, M. H. Freeman, C. S. Gleim, C. M. Holland, J. F. O'Rourke.

McMASTER, ROBERT NEER—P. O. Box M, Redondo Beach, Cal.—(Age 30. Born Los Angeles, Cal.) (B. S. in C. E., Univ. of Southern Cal., 1916.)—June 1911 to Sept. 51 1912 Chainman and Rodman with various engineers and companies of Los Angeles, including E. T. Wright, Geo. Tuttle, Union Oil Co., Gen. Petroleum Corporation and (11) Salt Lake Ry.: June to Dec. 1916 with American Beet Sugar Co., Oxnard, Cal., as Chainman, Rodman, Instrumentman and Topographical Draftsman on 1 500-acre irrigation project at Saugus, Cal.: Feb. to Sept. 1917 Graduate Student, Dept. of Physics Univ. of Southern California, Los Angeles, Cal.: Sept. 1917 to March 1918 Teacher of mathematics, Calexico (Cal.) Union High School: March to Dec. 1918 with U. S. Army, last 5 months as Topographer, Photographic Sec., Air Service: March and April 1919 Inspector, Shell Co. of California, on installation of vacuum gas collecting system, in charge of material distribution and inspection of installation: May 1919 to Feb. 1920 Instrumentman, Oregon Highway Dept., establishing alignment and laying grades, computing earthwork and pavement quantities for basis of payment to contractors: March to June 1920 Instrumentman and Draftsman with O. A. Gierlich, City Engr. for El Monte, Arcadia and Glendora, subdivision and city work, preparing maps for recording with County Recorder, etc.: June 1920 to date Surveyor and Engr., Chanslor-Canfield Midway Oil Co., Fellows and Redondo Beach, Cal., all field work, surveying, laying out oil gathering systems, shipping plants, etc.; first 9 months of 1922 also all field accounting at Redondo. **(Active practice 6.7 years: Res. Ch. 4.3: Design 1.2).** Refers to E. L. Adams, T. D. Allin, C. W. Lawrence, W. Reinhardt, G. S. Young.

MANN, FRANKLIN HARVEY—317 Russell Ave., Ames, Iowa—(Age 43. Born Apple River, Ill.) (B. A., Univ. of Wis., 1905.)—1905 to 1908 (2 years) with Great Northern Ry. 52 on location and construction, 1 year as Rodman, then successively Transitman, Res. Engr. and in office: 1908 to 1911 (3 years) with Empire Eng. Corporation of New (7) York City, first as Engr., then Supt. on Barge Canal work, had charge of four contracts (about \$1 000 000 each): 1911 to 1912 (6 months) Field Mgr., English Oil Co. in oil fields of Trinidad: 1912 to 1913 (1 year) in private practice as Contr. in Florida: 1913 to 1914 (1 year) with Bates & Rogers of Chicago as Supt. in charge of constructing 40 000-h. p. dam across Connecticut River: 1914 to 1915 (nearly 9 months) with John Marsch of Chicago as Supt. in charge of concrete work in building Grand Trunk Ry. from Palmer, Mass., to Providence, R. I.: 1915 to date (7 years) with Iowa State Highway Comm., 2 years as Asst. Engr., then Constr. Engr.; at present in charge of all road and bridge construction on the Primary Road System. **(Active practice 15.2 years: Res. Ch. 11.2: Design 1.5).** Refers to G. L. Campen, H. J. Kuelling, A. Marston, J. S. Morrison, F. R. White.

MATTOON, ROY ERNEST—Sawyer, Minn.—(Age 38. Born Ft. Ripley, Minn.)—Dec. 1905 to Nov. 1906 Asst. Engr. to Guy V. McClure, Cons. Engr., railway location; Draftsman, 53 City of Oklahoma: Dec. 1906 to Nov. 1910 Asst. Engr. and Res. Engr. on location and construction, Soo Line Ry.: Jan. to April 1911 Draftsman on electric railway location, Duluth (7) Eng. Co.: May to July 1911 Asst. Engr. to D. A. Reed, Cons. Engr., on railway location and plotting: Aug. to Sept. 1911 Locating Engr., Mesaba Elec. Ry.: Oct. 1911 to Jan.

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1912 Res. Engr., hydro-electric plant, for D. A. Reed, Duluth, Minn., on construction of power house and dam: Jan. to Dec. 1912 Res. Engr. on construction, Mesaba Elec. Ry. Co.: Feb. 1913 to Sept. 1914 Engr. with Nichols & Farrell and Farrell & Alexander, platting, road surveys, sewer work, etc.; also some private work: Oct. 1914 to Nov. 1915 Asst. Engr., Judicial Ditches, St. Louis and Carlton Counties, Minn., drainage work; Nov. 1915 to date Engr. in Chg., on same work, designing and construction of drainage ditches, roads, bridges, etc. (**Active practice 16.4 years: Res. Ch. 12.1: Design 7.**) Refers to L. Ayres, A. J. Bawden, T. F. McGilvray, D. A. Reed, W. H. Woodbury.

ELCHER, CLARENCE LEWIS—Princeton, Ill.—(Age 37. Born Charles City, Iowa.)—Oct. 1910 to May 1911 and June to Nov. 1912 Rodman and Chainman for City Engr., Charles City, Iowa: May to Sept. 1911 Rodman and Chainman for County Engr., Floyd County, Iowa: April to Sept. 1913 Rodman and Chainman for both of these, also some private work in simple drainage and land-line surveys: Sept. 1911 to March 1912 and Sept. 1913 to Jan. 1914 Student, Civ. Eng. course, Iowa State Coll.: April to Sept. 1914 Instrumentman with County Engr., Floyd County; on highway work: Feb. to Sept. 1915 Instrumentman, Draftsman and Inspector on electric construction and surveys, Charles City Western R. R.: Sept. 1915 to Jan. 1918 Chf. of Party on surveys for 200 miles of transmission lines; Solicitor for rights of way for transmission lines and flowage lands; Engr. on flood protection work, Cedar Valley Elec. Co., Charles City, and West Washington Sq., Philadelphia: Jan. 1918 to Jan. 1919 County Highway Engr., Bremer County, Iowa, on construction of bridges and earth roads: Jan. to Aug. 1919 Jun. Highway Engr., Illinois Div. of Highways, Chf. of Party, Draftsman and Inspector on concrete highway construction: Aug. 1919 to date County Supt. of Highways, Bureau County, Ill., in charge of all highway work on gravel road construction, assisting State Dist. Engr. on location and right of way for bond issue roads. (**Active practice 10.4 years: Res. Ch. 6.7: Design 5.5.**) Refers to L. M. Arms, O. L. Gearhart, P. D. Gillham, C. Olden, B. H. Piepmeyer, F. T. Sheets.

EYERS, MORRIS—605 West 175th St., New York City—(Age 36. Born Elizabethgrad, Russia.) (B. S., Rose Pol. Inst., 1907.)—1903 to 1907 (vacations and spare time during college course) with Fred Rush, Civ. and Min. Engr., Terre Haute, Ind., on surveying and engineering, especially that connected with coal mines: May to Sept. 1905 Rodman and Instrumentman, Chicago & Eastern Illinois R. R.: June 1907 to March 1910 Draftsman, and Sept. 1910 to Jan. 1912 Designer and Computer, Lorain Steel Co., Johnstown, Pa., on computation and design of special track work, frogs, switches, etc.: March to Sept. 1910 Draftsman, Cambria Steel Co., Johnstown, on structural steel mill and office building work; also part of time in mechanical drawing room on general work: Jan. 1912 to Jan. 1916 Gen. Mgr., Rex Mfg. Co., Johnstown, manufactured electric washing machines: Jan. to Sept. 1916 in charge of office, for O. P. Thomas, C. E., Johnstown, surveying and on various kinds of engineering work: Sept. 1916 to March 1918 Designer and Computer, Wm. Wharton, Jr., & Co., Inc., Easton, Pa., on frogs, switches and special track work: March 1918 to Sept. 1921 Track Work Engr., Easton Car & Constr. Co., in full charge of office and shop in R. R. Track Dept., also Sales Engr. on industrial cars and track: Sept. 1921 to April 1922 private business as Mfrs. Agt. at Easton, representing several industrial lines: April 1922 to date Sales Engr. and Office Mgr., Koppel Industrial Car & Equipment Co., New York City, industrial cars and track. (**Active practice 14.5 years: Res. Ch. 8.5: Design 4.**) Refers to S. H. Harrison, M. A. Howe, E. D. Kahlert, J. McNeal, E. J. Miner, W. R. Plew, C. C. Scharpenberg.

ELLER, HAROLD THOMAS—1st Lieut., 13th Engrs., Ft. Humphreys, Va.—(Age 26. Born Burlington, Iowa.) (U. S. Mil. Acad., 1920; C. E., Rens. Pol. Inst., 1922.)—Sept. 1920 to Jan. 1921 student, Engr. Basic School, Camp A. A. Humphreys, Va.: Jan. to May 1921 troop duty, 1 month as Company Commander, remainder of time in charge of construction and repair of cantonment target range: June to Sept. 1922 troop duty, Instructor of National Guard and Reserve Officers, Camp Devens, Mass.: Sept. to Nov. 1922 student, Chemical Warfare School, Edgewood Arsenal, Md.: Nov. 1922 to date with 13th Engrs. (**Active practice 1.2 years: Res. Ch. 0.4.**) Refers to E. R. Cary, L. W. Clark, T. R. Lawson, W. W. Rousseau, E. A. Touceda.

ELLS, LOYOLA LEONARD—1249 Ripley St., Santa Rosa, Cal.—(Age 43. Born Sioux City, Iowa.)—April to Oct. 1905 Axeman, Flagman and Chainman, Western Pacific R. R. in California: Oct. 1905 to Dec. 1906 Chainman and Timber Cruiser with V. S. Barber: Dec. 1906 to June 1911 Chainman and Officerman with County Surveyor of Alameda

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(13) County, Cal.: July 1911 to April 1913 Instrumentman with City Engr. of Oakland, Cal., in charge of construction of about 100 miles of sanitary sewers: April 1913 to Dec. 1914 Asst. City Engr. of Santa Rosa, Cal., in charge of municipal work: Jan. 1915 to Jan. 1916 Deputy County Surveyor of Sonoma County, Cal.: Jan. 1916 to July 1917 in private practice of surveying and civil engineering: July 1917 to March 1918 Navigator and in charge of engineers on ship repairs, U. S. Navy: April 1918 to date City Engr. of Santa Rosa: since April 1922 also Street Commr.; Supt. of sewers and water, Santa Rosa. (Active practice 17.3 years: Res. Ch. 8.6: Design 5). Refers to J. W. Berkefeld, C. E. Beugler, C. H. Boardman, W. S. Farley, C. C. Kennedy, G. A. Posey, F. H. Tibbets.

MORELAND, JAMES EDGAR—4409 Alabama Ave., Chattanooga, Tenn.—(Age 31. Born Knoxville, Tenn.)—Sept. 1908 to May 1911 student, Civ. Eng. course, Univ. of

58 Tennessee: June 1911 to May 1914 Instrumentman and Asst. Engr., Robertson County (Tenn.) Pike Comm., on surveys and design of culverts and bridge (36 ft. span):

(10) May 1914 to Aug. 1915 Asst. Engr., Dickson County Pike Comm., at Dickson, Tenn., on location and surveys, some supervision: Aug. 1915 to April 1916 Res. Engr., G. B. Howard & Co., Nashville, in charge of 50 miles of road construction in Humphreys County, Tenn., location and construction: April 1916 to July 1917 County Engr., Marion County, Tenn., in charge of locating, designing and constructing \$100 000 worth of roads, bridges and culverts: July 1917 to date with Tennessee Highway Dept., 2 years as Asst. Engr. in charge of locating party and Res. Engr. on construction and designing; 2 years Dist. Engr. in charge of location and construction of Federal and State Aid roads; since July 1921 Div. Engr., 2d Div., at Chattanooga, Tenn., in charge of all location, design, construction and maintenance in twenty-four counties, Federal and State Aid roads (Active practice 11.5 years: Res. Ch. 6.6: Design 2.3). Refers to R. M. Barker, W. P. Butler, B. H. Klyce, D. Q. McComb, A. M. Nelson, C. H. Olmstead.

MUDIE, JOHN McLEOD—2469 Canton Ave., Detroit, Mich.—(Age 41. Born Kingston, Ont. Canada.) (Royal Mil. Coll. of Canada, 1901.)—1902 to 1903 (1½ years) Rodman and

59 Instrumentman, Buffalo, Rochester & Pittsburg Ry.: 1904 to 1908 (3½ years) Draftsman, Dept. of the Interior, Ottawa, Canada; passed first examination and served full

(7) apprenticeship for degree of Dominion Land Surveyor: 1910 to date Instrumentman (9 months), Asst. Engr. (10¾ years) and Chf. Engr. (last 6 months), Detroit United Lines. (Active practice 17 years: Res. Ch. 11.2: Design 11.2). Refers to J. M. Hartgering, C. W. Hubbell, H. E. Riggs, H. A. Shuptrine, L. C. Smith.

MULLER, RICHARD FREDERIC ANTOINE—24 Iowa Circle, Washington, D. C.—(Age 39. Born Liège, Belgium.) (E. E., Columbia Univ., 1917; D. S., Univ. of Quito, Ecuador,

60 1921.)—1902 to 1903 (1½ years) Designing Draftsman, New York & New Jersey Telephone Co.: 1905 to 1907 (about 2 years) with Hugh L. Cooper, Cons. Engr., New York.

(5) as Designing Draftsman assisting in design of hydraulic features of McCall Ferry Development, Great Western Power Co.'s Plant on Feather River, Cal., and Mississippi Development at Keokuk, Iowa (preliminary studies): 1907 to 1909 (about 2 years) Designing, Hydr. and Elec. Draftsman with Vielé, Blackwell & Buck, New York, on plants, Great Western Power Co.'s Plant, California, Hoosie River and Idem River Developments at Schaghticoke and Johnsonville, East Canada Creek Dam and Cobalt River Plant, Canada: 1909 to 1913 (4 years) Prof. of Hydr. and Elec. Eng., Univ. of Ecuador, at Quito: 1913 to 1915 (2 years) student, Columbia Univ., and X-Ray Expert in War Service: 1916 to 1917 (1 year) Cons. Engr. for Govt. of Ecuador (legislation of water power, design and construction of water supply systems; sewers, bridges; reports on water-power sites with special reference to electrification of Govt. railroads): summer 1917 student, Columbia Univ.: 1917 to 1919 (2 years) Prof. of Elec. Traction, also post-graduate student, Univ. of Quito: 1920 to 1921 (1½ years) Cons. Engr. for Govt. of Ecuador, and Chf. Engr. of Junta de Obras Publicas, Provincia de El Oro, Ecuador (bridges, stream yield analysis, flood control, studies and construction, Rios, Puyango and Jubones): 1922 writing a handbook for engineers in Spanish. (Active practice 14 years: Res. Ch. 8.5: Design 5.5). Refers to F. O. Blackwell, H. L. Cooper, J. H. Manning, C. H. Moore, P. Wahlman.

MUNSON, THURMOND ARMOUR—College Station, Tex.—(Age 33. Born Columbus, Tex.) (B. S., Agri. and Mech. Coll. of Tex., 1910.)—June 1910 to Aug. 1911 on public highway

61 improvement as Instrumentman on transit surveys and profile leveling, office work on profiles, bridge plans and estimate of materials, supervision of construction, monthly

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Estimates for payroll, Richmond, Tex., and Aug. 1911 to Jan. 1912 Instrumentman and Engr. in charge of street layout, drainage and sanitation, also land survey with Tolman Eng. Co., Houston, Tex.: Jan. 1912 to Sept. 1920 in private practice of civil engineering on the following: Jan. 1912 to Jan. 1914 topographic and hydrographic surveys of approx. 110 000 acres undrained land in South Texas; design and estimate of stream improvement, drainage canals and bridges, specifications, award of contracts and supervision of construction (total cost approx. \$250 000); Jan. to July 1914 Special Representative for N. A. Dawson, Highway Contr., in estimating work and submitting bids for road construction in Texas; Jan. 1915 to March 1916 associated with Tolman Eng. Co. as Superv. Engr. for highway construction; March 1916 to Jan. 1917 Engr. in charge of highway construction, design and supervision, Special Road Dist., Bay City-Columbia Road, Tex. (total expenditure approx. \$50 000); July to Nov. 1916 special work on property valuation for Gulf, Colorado & Santa Fe R. R.; Nov. 1916 to June 1918 topographic and hydrographic surveys, plans, specifications and supervision of work for reclamation of 40 000 acres of land by drainage and protection levees against Brazos River overflow at Angleton, Tex. (cost approx. \$80 000); also acted on appraisal boards, and as expert witness in settlement of boundary lines, and made land surveys for private and State property: Sept. 1920 to Nov. 1921 Asst. Prof., and Nov. 1921 to date Associate Prof., of Civ. Eng., Agri. and Mech Coll. of Texas. (Active practice 12.3 years: Res. Ch. 8.8: Design 0.7). Refers to E. N. Gustafson, D. Lee, J. C. Nagle, R. J. Potts, J. J. Richey, W. L. Stanton, A. A. Stiles.

HOLSON, ERNEST—17 Gramercy Park, New York City—(Age 36. Born Philadelphia, Pa.) (B. S., Mass. Inst. Tech., 1912.)—1900 to 1905 (5 years) machine, bench and assembly work in shops of Gen. Elec. Co. and American Locomotive Co., at Schenectady, N. Y., also in Standardizing Laboratory, Gen. Elec. Co.: 1905 to 1910 (2 years) design-
ing, laying out and inspecting brick, steel and concrete factory buildings for Gen. Elec. Co.: 1910 (4 months) assembling and erecting in field steel towers for high-tension transmission line for Viele, Blackwell & Buck: 1910 to 1911 (4 months) Chainman, New York Central & Hudson River R. R.: 1912 (4 months) Rodman, New York State Barge Canal: 1912 to 1915 (2% years) subway and caisson design, also shop and field inspection of steelwork and other construction material for New York State Public Service Comm.: 1914 (4 months) Chf. of Party on stadia survey of Schoharie Watershed for New York State Conservation Comm.: 1915 to 1916 (1½ years) with Aetna Explosives Co., on erection of new plants, superintending erection, inspecting and expediting new apparatus and Asst. Supt. of gun-cotton plant at Warren, Pa.: 1916 to 1919 with Babcock & Wilcox Co., as Field Engr. in charge on construction of large forge shop with equipment, Barberton, Ohio (9 months); Field Engr. in charge on extensive expansion of plants at Bayonne, N. J. (9 months), and at Barberton (5 months); Supt. of Constr. on same work at Bayonne (9 months): 1919 (5 months) assisted in Contract and Appraisal Depts. in forming Akron Home Owners Investment Co.: Campaign Mgr. for State of New Hampshire (1919, over 2 months) and Campaign Director for New England (1920, 5 months) during Salvation Army National Campaign for funds: 1920 (4 months) Supt. of Constr., Log Supply Co.'s plant in Quebec, Canada, for Austin Constr. Co.: 1920 to 1921 (4 months) Field Engr. in charge of surveys for dam and water supply project at Beaver Falls, Pa.; for Pittsburg Seamless Tube Co.: 1921 Instructor in Surveying, Stevens Inst. of Technology (nearly 3 months); Gen. Supt. of Constr., Communipaw Co., New York City, on construction of large commercial garages at Albany and Middletown, N. Y., and Newark, N. J. (over 7 months): 1922 (6 months) Supt. of Constr. for Dennison & Hiron, New York City, on construction of Marine Trust Co. Bldg. in Atlantic City, N. J. (Active practice 17.1 years: Res. Ch. 7.2: Design 2.4). Refers to C. F. Allen, W. P. Benjamin, R. E. Drake, F. E. Hermanns, E. F. Jacobi, G. L. Lucas, C. M. Spofford.

SHAUGHNESSY, THOMAS PATRICK—69 Carmelita St., San Francisco, Cal.—(Age 28. Born San Francisco, Cal.) (B. S., St. Mary's Coll., Oakland, Cal., 1915.)—July to Dec. 1915 Asst. Engr. (Rodman-Chainman), California Highway Comm., Div. IV, San Francisco, Cal., on highway final estimate field work and on field location: Aug. 1916 to Oct. 1917 with same Commission, Div. II, Dunsmuir, Cal., as Chainman on location survey (1 month), in charge of small highway construction and ballasting camp, later Asst. Supt. on road construction: Nov. 1917 to Dec. 1918 with U. S. Army, Infantry Engrs., Signal Corps, Cadet Pilot, Air Service: March to July 1919 with U. S. Dept. of Agriculture, Bureau of Public Roads, as Chf. Levelman in charge of level and cross-

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section party on highway work in mountainous country: July to Aug. 1919 Asst. Res. Engr. on construction, California Highway Comm., Div. II: Aug. 1919 to Nov. 1920 Engr. in charge of construction of 1600 ft. concrete and steel 16-ft. highway bridge for Sutter County, Cal.: July 1921 to May 1922 Concrete Inspector on Hetch Hetchy Dam for City of San Francisco, in charge of pouring of precast work and later in charge of night pouring on the dam; May 1922 to date Res. Engr., Tule and Baxter Creek Irrigation Dists., Lassen County, Cal., Inspector on construction of irrigation project (25 000 acres); work also involved making up of and presenting for payment the monthly estimates. (Active practice 5 years: Res. Ch. 2.2). Refers to P. N. Carlson, H. S. Comly, E. L. Cope, T. H. Means, M. M. O'Shaughnessy, A. E. Paddock.

PATTERSON, DONALD—314 L. B. Harrison Hotel, Cincinnati, Ohio—(Age 25. Born Iowa City, Iowa.) (B. of Eng., Coll. of Applied Sci., Univ. of Iowa, 1922).—June 1922 to **64** date Draftsman, Cleveland, Cincinnati, Chicago & St. Louis Ry., detailing and designing in Bridge Dept. of Chf. Engr.'s office. (Active practice 0.4 year). Refers to J. H. (9) Dunlap, R. B. Kittredge, F. A. Nagler, W. G. Raymond, S. M. Woodward.

PATZIG, MONROE LAWRENCE—206 Eleventh St., Des Moines, Iowa—(Age 37. Born Le Mars, Iowa).—Took courses in Electrical and Chemical Eng., International Correspondence Schools, and in Civ. Eng., American Correspondence School: 1903 to 1904 (1½ years) Engr. Helper in City Engr.'s office, Des Moines, rodding, chaining, leveling (7) and drafting: 1904 to 1906 (2 years) Chairman, Chicago Great Western Ry., Des Moines, chaining, leveling and transit work, drafting and estimating: 1906 to 1908 (2 years) Asst. Engr. with John W. Budd, Engr., surveying, estimating, instrument work and drafting: 1908 to 1913 (5 years) Testing Engr., City of Des Moines, on supervision of testing and inspection of city improvements and their materials: 1913 to 1914 (1 year) in private practice of engineering on real-estate development, designing and laying out city additions, superintending construction of sewers, water-works, curbing, paving and sidewalks; 3 months also County Engr., Cass County: 1914 to 1916 (2 years) Gen. Mgr. and Partner, Monarch Eng. & Inspection Co., surveying, engineering, testing and superintendence of inspecting of paving work: 1916 to date (6 years) Gen. Mgr. and Owner, Patzig Laboratories; Cons. Engr., testing engineering materials and inspecting paving construction. (Active practice 19.5 years: Res. Ch. 15: Design 2). Refers to L. A. Canfield, O. W. Crowley, F. R. Hubbard, A. W. Lee, J. B. Marsh, J. E. Van Liew.

PAUL, CARROLL—505 E. Ridge St., Marquette, Mich.—(Age 40. Born Tokyo, Japan) (B. S., Dartmouth Coll., 1903; C. E., Thayer School of Civ. Eng., 1904).—Dec. 1904 to Oct. 1905 with U. S. Reclamation Service as Eng. Aid, instrument work; March to Sept. 1906 Eng. Aid, and Sept. 1906 to July 1907 Asst. Engr., North Platte Project. (7) Asst. to Engr. in charge of distribution system, mostly office work, monthly estimates, computation of costs, design of concrete drops in lateral canals, determination of irrigable lands, etc.: Aug. 1907 to date Asst. Civ. Engr. and Civ. Engr., U. S. Navy, as follows: Aug. 1907 to May 1908 Ensign, Asst. to Officer in charge of inspection of electric machinery for Bureau of Yards and Docks, at Gen. Elec. Co., Schenectady, N. Y., on tests of machinery; May 1908 to July 1909 on same work as Officer in Chg.; July 1909 to Sept. 1910 at Bureau of Yards and Docks in charge of Power Plant Sec.; under Chf. of Bureau had charge of operation, repair, extensions and new construction of central power plants in all Navy Yards and Naval Stations; Sept. 1910 to April 1911 Asst. to Public Works Officer, Navy Yard, Norfolk, Va., in charge of general maintenance and repair of public works at the yard; May 1911 to Oct. 1912 at Naval Station, Olongapo, Philippine Islands, about 2 months as Asst. to Public Works Officer, then Public Works Officer, in charge of maintenance and repairs to buildings, water front structures, distribution systems, etc.; Member of Board for special investigation of condition of Dry Dock *Dewey*; in Aug. 1911 became Lieut. (J. g.); Nov. 1912 to May 1913 Public Works Officer, Naval Station, Cavite, Philippine Islands, in charge of all maintenance and repairs to public works, including execution of underwater repairs to Marine Ry.; Sept. 1913 to Jan. 1915 Senior Asst. to Public Works Officer, Navy Yard, Philadelphia, Pa.; about one-third of time (during absence of Public Works Officer) in charge of Public Works Dept.; work included design of shipbuilding ways (under general direction Public Works Officer); April 1914 became Lieut.; Jan. 1915 to Oct. 1916 Public Works Officer and Senior Asst. to Industrial Mgr., Naval Station, New Orleans, La., in charge of all public works and Asst. in all other operations of station except military administration; Nov. 1916 to April 1917 at Naval Training Station, Great Lakes, in

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charge of construction and tests of mechanical filter plant for station; May 1917 to Oct. 1919 Public Works Officer, Naval Station, Guam; July 1917 became Lt.-Commander; Dec. 1919 to Jan. 1922 Public Works Officer, Navy Mine Depot, Naval Fuel Oil Station and Naval Flying Field, Yorktown, Va.; Jan. to Oct. 1922 Public Works Officer, Marine Barracks, Paris Island, S. C. (Active practice 16 years: Res. Ch. 12.1: Design 11.1). Refers to C. L. B. Anderson, R. E. Bakenhuis, F. H. Cooke, L. E. Gregory, C. W. Parks.

ENICK, JUNIUS MARSHALL—524 North Sheppard St., Richmond, Va.—(Age 36. Born in Halifax County, Va.)—Nov. 1903 to Jan. 1905 Rodman and Instrumentman, Raleigh & Pamlico Sound Ry. (now Norfolk & Southern Ry.): Jan. 1905 to Sept. 1906 Asst. Res. Engr. on construction, N. & S. Ry.: Sept. 1906 to Sept. 1907 Asst. Engr., Durham & Southern Ry., in entire charge of survey and construction for revision of alignment and grade (approx. cost \$100 000): Sept. 1907 to Feb. 1908 in Accounting Dept., American Locomotive Co., Richmond, Va.: Feb. 1908 to Nov. 1909 Asst. Supt., I. J. Smith & Co., Gen. Contrs., Richmond, in charge of sewers, street paving and reinforced concrete buildings: Nov. 1909 to July 1910 Asst. Res. Engr. on construction, Atlantic Coast Line Ry. Co., Cheraw, S. C.: Oct. 1910 to date with Virginia Ry. & Power Co., until Jan. 1917 as Asst. Chf. Engr. of Rys. in charge of construction of reinforced concrete car barns and tracks, Richmond and Petersburg Div., including designing and building of car houses, repair shops and street railway tracks; then Engr. M. of W., Richmond, Petersburg and Interurban Div., in charge of designing and building of all tracks and buildings, also maintenance of 100 miles of street railway tracks, large part being in paved streets; since March 1922 Chf. Engr. of Rys., same Division, at Richmond, in entire charge of construction and maintenance of all tracks, buildings, bridges, viaducts, also maintenance of all rolling stock. (Active practice 17 years: Res. Ch. 13: Design 13). Refers to J. Y. Bayliss, H. P. Beck, H. A. Claiborne, Jr., E. M. Hastings, T. B. Merrick, A. J. Saville.

PENNIMAN, WILLIAM MERIT—428 Customhouse, St. Louis, Mo.—(Age 54. Born Windsor, Vt.) (B. S., Dartmouth Coll., 1918.)—1893 to 1922 (30 years) with U. S. Engr. Dept., practically continuously on Improvement of Mississippi River between mouths of Ohio and Missouri Rivers, until 1903 as Transitman, Surveyor and Jun. Engr., and since 1903 then Asst. Engr., St. Louis (Mo.) Office in local charge of surveys, river improvement works, wing dams, bank protection, portable jetties, and dredging; design of dredging machinery, compilation of physical data; in charge of survey, St. Louis to Cal. (14-ft. waterway, Lakes to Gulf) (1907-1909); estimate of cost and projects for improvement of this section of river by complete regulating works and for regulating works and dredging in connection with fixed dams; since 1909 in supervising capacity, regulating works, dredging, surveys and examination, and removing snags and wrecks from Mississippi River between St. Louis and Gulf of Mexico. (Active practice 30 years: Res. Ch. 20: Design 5). Refers to M. L. Holman, W. S. Mitchell, J. A. Ockerson, C. L. Potter, J. W. Skelly, C. M. Talbert, E. E. Wall.

PERRIN, WILLIAM WEAVER—P. O. Box 524, Glen Cove, N. Y.—(Age 25. Born Lafayette, Ind.) (B. S. in Civ. Eng., Purdue Univ., 1922.)—June to Sept. 1920 Transitman with County Surveyor, Tippecanoe County, Lafayette, Ind., road and drainage work and surveys: Aug. and Sept. 1921 Rodman, State Conservation Comm. of Indiana: Nov. 1922 to date Transitman with William H. Bowne, Civ. Engr., Glen Cove, N. Y.: refers to W. H. Bowne, W. K. Hatt, J. H. Small, Jr., W. F. Starks, R. B. Wiley.

PIRKNER, HERBERT RUDOLF—169 Senator St., Brooklyn, N. Y.—(Age 25. Born New York City.) (B. S. in Civ. Eng., Cooper Union Evening School, 1920.)—Sept. 1918 to Jan. 1921 Draftsman and Checker on drawings of reinforced concrete buildings, Turner Constr. Co.: Jan. to Oct. 1921 Draftsman and Designer on reinforced concrete structures, (1) White Constr. Co.: Oct. 1921 to Jan. 1922 Draftsman and Checker, W. T. Anderson, Inc., in charge of drawings of mill building and concrete warehouse: March 1922 to date Estimator of reinforced concrete buildings, White Constr. Co. (Active practice 4.2 years: Res. Ch. 0.8: Design 0.4). Refers to W. T. Anderson, R. L. Bertin, F. Leiser, H. C. Paulock, G. H. Preston, O. S. Schlich, L. W. Weed.

PONTZ, HARRY ARTHUR—722 Dickinson St., Philadelphia, Pa.—(Age 23. Born Dwinsk, Russia.) (B. S. in Civ. Eng., Univ. of Pa., 1922.)—Nov. 1917 to July 1918 Rodman and Transitman on construction work at Hog Island, Pa., Stone & Webster, Boston: July to Oct. 1918 Transitman on construction of Greenwich Army Terminal, Philadelphia, Day

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(4) & Zimmerman: June to Oct. 1921 Asst. Field Engr. on construction of conduit, etc., Philadelphia Elec. Co., layout and inspection work: Sept. 1922 to date Reinforced Concrete Designer and Estimator, Truscon Steel Co., Philadelphia. (Active practice 1.2 years). Refers to W. H. Barton, Jr., H. C. Berry, A. J. Boase, C. L. Eckel, I. Orlan.

PROCTOR, THOMAS WHITE—23 Hammond St., Chestnut Hill, Mass.—(Age 26. Born Boston, Mass.) (A. B., Dartmouth Coll.; B. S., Mass. Inst. Tech., 1921.)—Aug. 1921 to

72 May 1922 Chainman, Maine Central R. R., drafting, tracing, transit and level work; designed small wooden stringer bridge: May to Nov. 1922 with H. K. Barrows, Cons.

(2) Engr., Boston, Mass., 6 months as Transitman on reservoir dam construction at Salem, N. H., ran transit and level, gave line and grade, figured quantities and inspected concrete in dam construction and earth filling in earth dam, and last 2 weeks at Gardner, Mass., on survey for pipe-line, ran transit and kept notes; office work in Boston office. (Active practice 1.3 years). Refers to H. K. Barrows, C. B. Breed, A. H. Morrill, C. M. Spofford, B. T. Wheeler.

PROVOST, ANDREW J., Jr.—39 West 38th St., New York City—(Age 55. Born Whitestone, N. Y.) (C. E., School of Mines, Columbia Univ., 1889.)—1889 to 1898 (9 years) Asst.

73 Engr., Dept. of Public Works, Brooklyn, N. Y., sewerage, water supply, railroad grade elimination, etc.: 1898 to 1903 (5 years) Asst. Engr., Dept. of Finance, New York City,

(1) on sewerage and sewage treatment, water supply, pavements, bridges, Atlantic Ave., Subway, Brooklyn, etc.: 1903 to 1906 (3 years) Engr. to Commr. of Public Works, Borough of Brooklyn, all Borough engineering projects: 1906 to date (16 years) member of firm, Lederle & Provost, Engrs., New York City, acting as Designers, Supervisors and Consultants in matters connected with water supply, water purification, sewerage, sewage treatment, plumbing, heating, ventilation, public health problems, etc.; individually also as Cons. Engr. for various municipalities, institutions, industrial plants, etc., in similar matters; Expert for State of New York in litigation before Federal Courts regarding Passaic Valley Trunk Sewer, for State of New Jersey on litigation relating to river pollution, and for New York City in various litigation involving engineering projects; 1909-1916 San. Expert to Board of Water Supply, New York City, in connection with problems arising out of construction of Catskill Aqueduct and related work; also Member, Metropolitan Sewerage Comm. of New York (1906 to 1908), Special Lecture in hygiene, New York Univ. (1915 to date) and on water supply and sewerage Brooklyn Polytechnic Inst. (1921 to 1922). (Active practice 33 years: Res. Ch. 30: Design 19). Refers to R. Hering, O. H. Landreth, J. S. Langthorn, N. P. Lewis, A. S. Tuttle.

PULLIAM, HENRY ABBETT—City Hall, Paducah, Ky.—(Age 28. Born Owenton, Ky.) (A. B., McLean Coll., 1914.)—June to Sept. 1913 Draftsman, Bell Telephone Co.

74 Paducah, Ky.: May to Sept. 1915 Instrumentman and Draftsman, McCracken County, Ky., surveyed and drew plans for highway construction: Sept. 1915 to Aug. 1916 with

(9) P. & I. R. R., as Inspector of concrete and steel, Instrumentman and Draftsman on construction of 5 700-ft. bridge over Ohio River at Metropolis, Ill.: Sept. to Dec. 1916 1st Asst. Chf. Engr., Bond Issue Eng. Staff, Ballard County, Ky., instrument work on location and construction of highways: Jan. 1917 to May 1918 Instrumentman and Asst. Constr. Supt., Central Romana, La Romana, Dominican Republic, on sewer and sugar mill construction, concrete, rubble, steel and timber work; also wharf building: May to Dec. 1918 Instructor and Asst. to Field Engr. Officer at Crail, Scotland, in U. S. Air Service, mechanical and engineering work incident to an aviation field: Jan. to Sept. 1919 Instrumentman and Constr. Supt., Cuyamel Fruit Co., Honduras, railroad location and maintenance, drainage, surveying and construction on Honduras-Guatemala Frontier: Oct. 1919 to June 1920 Correspondent for *Ingenieria Internacional* in Spain; also wrote report for Riegos y Fuerza del Ebro Hydroelectric Corporation: June 1920 to date Chf. Engr., Board of Drainage Comms. for Mayfield Creek Drainage Dist. in McCracken, Graves, Carlisle and Ballard Counties, Ky., revision of plans and construction of \$530 000 system of drainage canals and ditches, in full charge: Jan. to Oct. 1922 also Commr. of Public Works and City Engr. of Paducah; designed and put under contract and at present constructing \$550 000 worth of sewers, and at present on design of \$500 000 addition to system, also designing over \$125 000 worth of street construction. (Active practice 7.2 years: Res. Ch. 3.5: Design 0.8). Refers to R. B. Brooks, W. F. Brooks, C. R. Fickes, S. R. Ginsburg, V. L. Havens, W. W. Horner.

RAMSAY, MALCOLM—3801 Bourland St., Greenville, Tex.—(Age 42. Born Mahanoy City, Pa.)—Aug. 1908 to Jan. 1912 Instrumentman and Inspector on street construction, City 75 of Memphis, Tenn.: Jan. to April 1912 Topographer, Rodman and Levelman, Memphis-

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Pensacola R. R. : Aug. 1912 to April 1913 Instrumentman on topographic and subdivision surveys for H. W. Brennan, Memphis: May to Sept. 1913 and June to Aug. 1914 Instrumentman on drainage surveys, Morgan Eng. Co., Memphis: March to June 1914 Res. Engr. on sanitary sewers, New Albany, Miss.: Jan. 1915 to Dec. 1916 land surveys in Western Tennessee, private work: Dec. 1916 to Sept. 1917 Instrumentman on drainage surveys for A. W. Naylor: Sept. 1917 to Sept. 1919 Masonry Inspector and Instrumentman, maintenance, Louisville & Nashville R. R., Memphis Div.: Sept. to Nov. 1919 Instrumentman, Tennessee State Highway Dept.: Nov. 1919 to June 1920 Res. Engr. on sanitary sewers, Drew, Miss.: June 1920 to Nov. 1921 Instrumentman, drafting and inspecting on bridges, Hunt County, Tex., and Nov. 1921 to date Asst. on street paving, sewers and general municipal work, A. D. Duck, Greenville, Tex. (**Active practice 12.6 years: Res. Ch. 3.8: Design 0.6**). Refers to G. R. Burtner, J. P. Carey, W. D. Dockery, A. D. Duck, R. W. Gay, L. L. Hidinger, G. A. McClellan, E. C. Wild.

P. WILLIAM GREENFIELD—18 West 4th St., Bethlehem, Pa.—(Age 26. Born New York City.) (S. B., Mass. Inst. Tech., 1922.)—Sept. 1922 to date Apprentice on erection work, Bethlehem Steel Bridge Corporation. (**Active practice 0.2 year**). Refers to H. K. Barrows, C. B. Breed, J. W. Howard, C. H. Mercer, C. M. Spofford.

DY, MAURICE ALPHONS, Jr.—45 East 17th St., New York City—(Age 33. Born Astoria, N. Y.)—Oct. 1906 to Sept. 1917 with Purdy & Henderson Co., Cons. Engrs., until May 1912 as Tracer, Draftsman, Detailer, Inspector and Designer on all types of structures, steel office buildings, power houses and concrete buildings, also heavy foundations; on detailing of steel and concrete members, layout of floor plan and foundation for such structures as Pennsylvania Station Concourse, Hudson Terminal Bldg., Municipal Bldg., Metropolitan Tower, power house of Metropolitan Museum of Art, New York City, and Emerson Bldg., Baltimore, Md.; from May 1912 to Nov. 1916 Mgr. of Boston (Mass.) office, in active charge of general consulting work on design and inspection of all types of building construction, such as Boston Custom House, Copley Plaza Hotel, Wesleyan Bldg., sub-stations for Edison Elec. Co. office, bank, and various types of concrete buildings; after Nov. 1916 in charge of Constr. Dept., New York office, designing and supervising construction of factory munition plants; also evening studies at Columbia Univ. (1908-1909) and Brooklyn (N. Y.) Polytechnic Inst. (1909-1911), and special studies at Massachusetts Inst. of Technology (Sept. 1914-May 1916): Sept. 1917 to Jan. 1918 Special Engr., Ordnance Dept., U. S. Army, Sandy Hook Proving Ground, in charge of preliminary design, framing and foundation for new proving grounds at Aberdeen, Md.: Jan. 1918 to Jan. 1920 in charge of Constr. Dept., Purdy & Henderson Co., New York, designing and supervising construction of munition and ordnance plants, such as Morgan Eng. Co. plant, Alliance, Ohio, and construction of cantonment, Camp Las Casas, San Juan, Porto Rico, for U. S. Army, also various industrial plants: Jan. 1920 to date Constr. Mgr., in charge of designing, estimating and supervising construction on such work as B. F. Goodrich Rubber Co., Akron, Ohio, plant for Jos. T. Ryerson & Sons Co., Jersey City, and construction of hotel at Nassau, Bahamas. (**Active practice 16.2 years: Res. Ch. 8.4: Design 10**). Refers to C. D. Coffman, H. F. Lame, W. C. Parmley, C. T. Purdy, N. A. Richards, H. V. Spurr, H. M. Ward.

CHARDS, WALTER CARLETON—Turner Constr. Co., Care, Sanford Mills, Sanford, Me.—(Age 23. Born Weymouth, Mass.) (B. C. E., School of Eng., Northeastern Univ., 1921.)—Sept. 1917 to Sept. 1919 (1½ years) with Whitman & Howard, Civ. Engrs. and Surveyors, Boston, Mass., 3 months as Rodman and remainder of time Transitman, survey and inspection on construction of Victory Destroyer Plant, Squantum, Mass., and other surveys: Sept. 1919 to June 1920 (5 months) Asst. in Civ. Eng. Dept., Northeastern Univ., Boston: June to Sept. 1920 Chf. of Survey Party, survey for Electric Power Transmission Line, etc.: Sept. 1920 to May 1922 (1½ years) with Dept. of Public Works, Div. of Highways, State of Massachusetts, nearly 5 months on surveys and remainder of time Res. Engr., on highway construction: May 1922 to date with Turner Constr. Co. of New York, as Engr. in charge of lines and grades on reinforced concrete building construction. (**Active practice 3.6 years: Res. Ch. 1.9**). Refers to W. G. Addis, T. A. Appleton, E. W. Branch, A. W. Dean, C. S. Ell, L. S. Homer, F. C. Pillsbury, H. B. Snell, A. C. Tozzer.

OBINSON, WILLIAM MORRISON, Jr.—P. O. Box 675, Atlanta, Ga.—(Age 31. Born Augusta, Ga.) (B. S. in C. E., Ga. School of Tech., 1911.)—June 1911 to May 1914 with Roadway Dept., Georgia R. R., Augusta, Ga., until April 1912 as Transitman and

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Draftsman; then Asst. Engr. on track layouts, architectural design of depots and design of roadway structures: June 1914 Valuation Draftsman, Charleston & Western Carolin Ry.: July to Oct. 1914 Asst. Engr., Eastern Dist., Southern Ry., Charlotte, N. C.; addition and betterment work by assignment, designing and supervising each project: Nov. 1914 to April 1916 Asst. Valuation Engr., Georgia R. R., in charge of terminal surveys and preparation of responses to Interstate Commerce Comm.'s valuation orders on land and rights-of-way, and of map reproductions: May 1916 to May 1917 Chf. Engr. Savannah River Terminal Co., Augusta, on design and construction of complicated railroad terminal layout with river wharf facilities: May 1917 to June 1918 2d Lieut. Engrs., U. S. Army; Student, First Officers' Training Camp, with 305th, 48th and 44th Engrs., Instructor, 3d Engr. Officers Training Camp: July 1918 to Aug. 1919 1st Lieut. Engrs., U. S. Army, with 44th Engrs., A. E. F., in France, 2 months on detached service as Roadmaster, Parthenay Dist., Chemin de Fer de l'Etat, and 2 months on camp design and construction: Sept. 1919 Office Engr. with E. G. Smith, Civ. and Hydr. Engr., on computations and drafting: Oct. 1919 to Feb. 1920 Accounting Engr., Charleston & Western Carolina Ry., in charge of addition and betterment reports to Interstate Commerce Comm.: Feb. to May 1920 Field Engr. with Nisbet Wingfield, Cons. Engr. topographical survey and map of region at West Point, Ga., with collection of flood data for levee system along Chattahoochee River: June 1920 to date Special Engr. of Valuation, Georgia R. R., A. & W. P. R. R. and Western Ry. of Alabama and affiliated short lines, Atlanta and Augusta, Ga., preparation of objections and protests against reports and valuation submitted by Interstate Commerce Comm., under Federal Valuation Act, and attendance at conferences, and hearings. (Active practice 11.4 years: Res. Ch. 10.3; Design 3.6). Refers to J. W. Barnett, T. P. Branch, B. M. Hall, Jr., C. E. Kauffmann, E. G. Smith, N. Wingfield, S. R. Young.

ROSS, WALTER—100 West 41st St., New York City—(Age 28. Born New York City)—1912 to 1914 (2 years) Timekeeper and Distribution Clerk, Smith, Hauser & Locher
80 Inc., on construction of Catskill Aqueduct: 1914 to 1915 (1 year) Field Engr., Underpinning & Foundation Co., directing work on construction of new subway: 1915 to 1919 (1) with Smith, Hauser & MacIsaac, Inc., 2 years as Field Engr. directing work on construction of new subway, and 2 years Asst. Supt. directing work at Camp Meade, Camp Franklin, Curtis Bay Ordnance Depot: 1919 to date (3 years) Engr. Supt., Spencer White & Prentis, Inc., on construction, building work, etc., in New York City; at present in charge of all field operations. (Active practice 10 years: Res. Ch. 8). Refers to J. R. Breuchaud, R. W. Greenlaw, E. A. Prentis, Jr., F. L. Pruyn, L. White.

RUGGLES, MILTON—Care, K. H. Gedney Co., Hastings, Nebr.—(Age 49. Born New York City.)—3 years student, Stevens Inst. of Technology: 3 years engineering and architectural study in Europe: 1900 to 1903 (3 years) Gen. Contr., railroad bed work, sewers, retaining walls and dams: 1905 to 1906 (1 year) in Estimating Dept., Post & McCord, (15) New York City: 1907 to 1908 (1 year) Chf. Draftsman, Crippen Eng. Co., New York City: 1908 to 1909 (1 year) Draftsman, Bldg. and Bridge Dept., Erie R. R., New York City: 1909 to 1910 (1 year) Structural Steel Detail Checker, and Designer, Toledo-Massillon Bridge Co., Toledo, Ohio: 1911 to 1913 (2 years) Structural Designer, Checker and Chf. Shop Inspector on all layout work, Goeller Iron Works, Newark, N. J.: 1914 (6 months) Structural Designer, Lackawanna Bridge Co., Buffalo, N. Y.: 1914 to 1915 (1 year) Chf. Draftsman, Illinois Tunnel Co., Chicago, Ill.: 1915 to 1916 (1 year) Chf. Draftsman, Evinrude Motor Co., Milwaukee, Wis.: 1916 to 1920 (4 years) Structural Engr., Yale & Towne Mfg. Co., Stamford, Conn., in charge of all work in structures and maintenance under Power & Plant Dept.; designed new power plant building, 160-ft. span traveling coal bridge, special 37-ft. span engine-room crane (10 tons capacity), also miscellaneous structural equipment: 1918 (3 months) special designing, steel and reinforced concrete work for U. S. Govt. at Bridgeport, Conn. (gun plant): 1920 to 1921 Chf. Engr. and Archt. of Plant Constr. Dept., B. F. Perkins & Son, Inc., Holyoke, Mass., completed plans and specifications for new manufacturing plant at Willimansett, Mass.: 1921 to date in private practice of engineering, architecture and surveying, at Springfield and Holyoke, Mass.: Jan. to Feb. 1922 Cons. Power Engr. investigating and reporting on power needs for Corticelli Silk Co. at Florence (Mass.) Plant, also at Leeds and Haydenville, Mass.; Feb. 1922 to date associated with K. H. Gedney Co., Archts. and Engrs., Hastings, Nebr., as Architectural Engr., Chf. Archt., Chf. Engr. and Chf. Designer. (Active practice 17.7 years: Res. Ch. 11; Design 15.7). Refers to G. B. Blackstone, C. F. Chase, E. A. Lambert, A. J. Post, J. L. Tighe.

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NET, FRANCIS PARKMAN—Care Dist. Engr., Carbondale, Ill.—(Age 24. Born Everett, Mass.) (B. S., Mass. Inst. Tech., 1922.)—Aug. to Sept. 1918 Rodman, Nov. 1918 to March 1919 Inspector of house connections and sewers, and June to Sept. 1919 Inspector of street paving, City of Malden, Mass.: June to Aug. 1920 Engr.-Draftsman in plans for renovation of power plant, Elec. Light & Power Dept., Braintree, Mass.: June to July 1922 Detailer, Lackawanna Bridge Works Corporation, Buffalo, N. Y.: July 1922 to date Jun. Highway Engr.; Res. Engr. on two reinforced concrete bridges, created rail. Engr. on grading and Inspector on paving, etc., Dept. of Public Works and Bldgs., Div. of Highways, State of Illinois. (Active practice 1.2 years: Design 0.2). Refers to C. B. Breed, J. W. Howard, E. F. Miller, L. Schwartz, C. M. Spofford.

TER, WILLIAM RODGERS—1305 Otis Bldg., Philadelphia, Pa.—(Age 37. Born Philadelphia, Pa.) (B. S. in C. E., Univ. of Pa., 1909.)—June 1909 to June 1910 Surveyor, Army Engrs., Philadelphia Dist., topographical and hydrographical survey of Delaware River, Trenton to Philadelphia, in charge of topographic party: June to Sept. 1910 Engr., Monolith Steel Co., Washington, D. C., detailing reinforcing steel for buildings and bridges: Sept. 1910 to Sept. 1911 with Barber & Ross, Washington, D. C., on structural steel detailing and designing: Sept. 1911 to Sept. 1913 Engr., Pittsburgh (Pa.) Steel Products Co., designing, estimating and detailing reinforced concrete structures: Sept. 1913 to July 1916 Asst. Engr., Dept. of Wharves, Docks and Ferries, Philadelphia, designing piers, bulkheads, retaining walls, etc., of reinforced concrete and structural steel: July 1916 to Nov. 1917 Engr., Cramp & Co., Contrs., Philadelphia, designing and estimating reinforced concrete structures: Nov. 1917 to Aug. 1919 Capt., Ordnance, Constr. Dept., Supply Div., Washington, D. C., designing and estimating docks, piers, magazines, reinforced concrete and structural steel buildings; Inspector on new pier and buildings on Governors Island, Ry. Artillery Ordnance Detachment, in France, supervision of mounting 14-in. railway guns: Aug. 1919 to May 1922 Engr., Concrete Steel Co., designing and estimating reinforced concrete structures: May 1922 to date Cons. Engr., designing, estimating and detailing reinforced concrete and structural steel: has made designs for Congress Cigar Co. (9 stories) (\$300 000), Miller North Broad Storage (7 stories) (\$150 000), Paper Mfrs. Co. (6 stories) (\$300 000) and American Stores (6 stories) (\$1 000 000) (all of reinforced concrete), Y. M. H. A. (5 stories, structural steel) (part design), and filter tanks (\$50 000); detailed reinforced steel for Delaware River Bridge anchorages and other buildings. (Active practice 13.5 years: Res. Ch. 9: Design 10.9). Refers to J. F. Curley, W. H. Gravell, H. B. Hurlbut, J. Meigs, E. E. Seyfert.

WEIDER, DELMONT JOSEPH—Box 551, Pocatello, Idaho—(Age 25. Born Salem, S. Dak.) (B. S., Univ. of Ill., 1919.)—June to Sept. 1916 Draftsman, Plant Engr.'s Office, Southwestern Telephone & Telegraph Co., St. Louis, Mo.: Sept. 1916 to June 1919 (during college terms, part of time, total over 1 year) Draftsman and Computer, maps, charts and diagrams, Draftsman and Asst. on Tests on reinforced concrete, computation of stresses, and (Sept. 1918 to June 1919) Asst. on tests, of reinforced concrete slabs relating to concrete ship construction, checking and computing of indeterminate stresses in reinforced concrete, Laboratory of Applied Mechanics, Univ. of Illinois: June to Sept. 1917 Instrumentman, Bannock Eng. Co., Pocatello, Idaho; Res. Engr. on ditch construction: June to Sept. 1918 Instrumentman and Chf. of Party with County Engr., Bannock County, Idaho, in charge of road surveys, location, estimates and platting: June to Nov. 1919 Engr., Bannock Eng. Co., Pocatello, on designs and estimates for reinforced concrete reservoir for the city, also for sewerage system, design of reinforced concrete natatorium, and surveys and estimates of irrigation dams and ditch systems: Nov. 1919 to Feb. 1920 Instructor, Idaho Technical Inst., Pocatello, higher mathematics, drawing and surveying: Feb. 1920 to May 1921 Engr., Bannock Eng. Co., in charge of construction of sewerage system, reinforced concrete natatorium and other structures, also of hydrographic survey of Portneuf River and dependent irrigation systems for Court decree and testimony: May 1921 to date City Engr. of Pocatello, in charge of construction of public works, maintenance and repairs, and in charge of streets, sewers and water-works. (Active practice 3.8 years: Res. Ch. 2.8: Design 1.2). Refers to E. S. Anderson, W. O. Cotton, M. L. Enger, F. H. Pickett, A. N. Talbot.

HULTHEIS, ARTHUR—43 Exchange Pl., New York City—(Age 22. Born New York City.) (C. E., Rens. Pol. Inst., 1920.)—June 1920 to June 1921 Asst. in Depts. of Mathematics and Surveying, Rensselaer Polytechnic Inst., Troy, N. Y., taught classes: June 1921 to Jan. 1922 Asst. to Mech. Supt., White Sulphur Springs, Inc., on surveying,

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(1) mapping, sewer construction, layout of water lines and general superintendence of carpenters and builders: Jan. to Sept. 1922 Engr. in office of Apparatus Engr., Western Union Telegraph Co., original design for parts of standard telegraphic equipment: Sept. 1922 to date Engr., J. G. White Eng. Corporation, office work, determination of areas, plotting of pipe-lines on hydro-electric developments conducted by the Hydroelectric Div. (Active practice 2.4 years). Refers to E. R. Cary, L. W. Clark, A. S. Cranmer, W. P. Creager, F. Kurtz.

SCIACCHITANO, JAMES JOHN—2044 Westchester Ave., New York City—(Age 25. Born Messina, Italy.) (B. S. in C. E., N. Y. Univ., 1921.)—June 1921 to Jan. 1922 Asst. Supt. and Supt. of Constr., Jardin Co., Inc., New York City; Asst. Supt. and Eng. in theatre construction, Newark; Supt. of foundation and masonry work, theatre construction, New York City: Feb. to Nov. 1922 Mgr. and member of firm, Pompei Tile Works, New York City, estimating, charge of outside work, and purchasing. (Active practice 1.5 years: Res. Ch. 1.5). Refers to H. E. Breed, W. S. L. Cleverdon, E. G. Hooper, C. T. Schwarze, C. H. Snow.

SHEDD, THOMAS CLARK—Univ. of Illinois, Urbana, Ill.—(Age 32. Born Worcester, Mass.) (Sc. B., Brown Univ., 1913.)—Sept. 1913 to June 1915 at Brown Univ., until June 1914 as Asst. in Mech. Eng., in charge (under Prof. Kenerson) of Materials Testing, Steam Eng. and Hydraulics Laboratories; after Sept. 1914 Instructor in M. E., in charge of classes in Machine Design, Kinematics and Eng. Drawing: June to Sept. 1914 with Merceereau Bridge & Constr. Co., Los Angeles, Cal., detailing and estimating quantities on reinforced concrete construction: Oct. 1915—Oct. 1917 with Phoenix Bridge Co., Phoenixville, Pa., detailing and checking steel bridges and special structures: Nov. 1917 to April 1918 Instructor in Civ. Eng., Lehigh Univ., South Bethlehem, Pa., in charge of classes in Bridge Design, Bridges and Dams (Higher Structures) and Reinforced Concrete Design; assisted with classes in Surveying: April 1918 to Oct. 1922 with Phoenix Bridge Co., on detail design, layouts, checking on heavy bridges and special structures; designing and estimating on bridges and buildings of all kinds: Oct. 1922 to date Associate in Structural Eng., Univ. of Illinois, in charge of classes in Bridge Design and Structural Design. (Active practice 8.9 years: Res. Ch. 5.9: Design 6.5). Refers to H. Cross, S. Gowen, J. E. Hill, J. R. Lambert, C. W. MacCornack, F. P. McKibben, C. C. Williams, J. C. Wright.

SNAITH, WILLIAM—136 South Fitzhugh St., Rochester, N. Y.—(Age 40. Born Montreal, Que., Canada.) (C. E., Univ. of Toronto, 1920.)—May 1907 to Feb. 1909 Chf. Draftsman, McGregor & McIntyre, Ltd., Toronto, Ont., detailing and designing structural steel for buildings: Feb. to May 1909 Mgr. and on design of steel plate and structural work.

(1) Toronto Iron Works, Ltd.: May to Sept. 1909 Designer of steel transmission towers and steel for stations and buildings, Hydro-Elec. Power Comm. of Ontario, Toronto: Oct. 1909 to April 1910 Fellow, Univ. of Toronto, Faculty of Applied Science, Toronto, teaching drafting: April 1910 to Sept. 1912 Asst. Engr. with Frank Barber, Cons. Engr. Toronto, on design and supervision of concrete and steel bridges and buildings, municipal engineering: Sept. 1912 to July 1915 Chf. Engr. and Secy., Thor Iron Works, Ltd., Toronto, management, design of heavy and light steel plate work, penstocks, tanks, etc.: July to Oct. 1915 Secy., Associated Mfrs. of War Munitions, Toronto, also technical service: Nov. 1915 to March 1916 in private consulting practice, design of special machinery for munitions: April to June 1916 Production Advisor (technical), Imperial Munitions Board, Toronto Representative: June 1916 to May 1919 Office Engr., Hydro-Elec. Power Comm. of Ontario, Niagara Power Development, in charge of field drafting, design of extension shops, camps, construction of railway, crushing and stone storage, etc.: June 1919 to Oct. 1920 Chf. Asst. with Frank Barber, Toronto, reorganized office and supervised municipal engineering practice, etc.: Oct. 1920 to Feb. 1921 Squad Leader, Riordan Co., Mattawa, pulp mill: Feb. 1921 to date Associate Engr., Forest Products Eng. Co., Chicago, production problems in wood-working. (Active practice 15.6 years: Res. Ch. 9.3: Design 5.1). Refers to H. G. Acres, F. A. Gaby, J. B. Goodwin, T. H. Hogg, C. H. Mitchell, R. O. Wynne-Roberts, C. R. Young.

SPENCER, FREDERICK BURR—100 West 41st St., New York City—(Age 32. Born New York City.) (A. B., 1911, and C. E., 1913, Columbia Univ.)—1913 to 1915 (2 years) Field Engr., Underpinning & Foundation Co., laying out and directing work on construction of new subway; 1915 to 1918 with Smith, Hauser & MacIsaac, Inc., 2 years as Field Engr. laying out and directing work on construction of new subway, and 1 year

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2. Western (1 year) Prin. Asst. Engr., U. S. Army, Constr. Div., in charge of design of wharf and equipment appurtenances, New Orleans Army Supply Base, timber, steel and concrete construction: 1919 to 1921 (1½ years) Res. Engr., Lockwood, Greene & Co., Engrs., in charge of Hydraulic construction of factory, buildings reinforced concrete: 1921 to date (1½ years) Engr. S. Crane Capt., Spencer, White & Prentis, Inc., designing, estimating and superintending construction, building work, etc., in New York City, especially foundation work. (Active practice 9 years: Res. Ch. 8: Design 2.8). Refers to J. R. Breuchaud, R. W. Greenlaw, E. A. Prentis, Jr., F. L. Pruyne, E. M. Van Norden, L. White.

25. Born 1922 Ass. and Engr. constr. practice. W. A. Hooper. WART, LOWELL O—U. S. Coast and Geodetic Survey, Washington, D. C.—(Age 27. Born Bainbridge, Mich.) (B. S. in Eng., Mich. State Agri. Coll., 1917.)—June 1917 to date with U. S. Coast and Geodetic Survey as follows: June 1917 to April 1918 Deck Officer and Aid, about 1 month computing at Washington, 4 months in Southwest Alaska on ship repair, and remainder of winter and early spring Watch Officer at Seattle, Wash.: April to Dec. 1918 Aid with wire-drag party on work for the Navy, in charge of end launch, which included signaling, taking angles and directing handling of the launch; Dec. 1918 to March 1919 at Seattle, Wash., and en-route to Phillipine Islands; March 1919 to March 1921 Aid and Jun. Hydrographic and Geodetic Engr. on ships engaged in surveying operations in the Philippines, in charge of hydrographic, topographic and triangulation parties; 4 months Executive Officer of S. S. *Romblon*, in complete charge (under Commanding Officer), and 4 months Commanding Officer on this Ship, overseeing and directing work of crew and handling accounts; since March 1921 on S. S. *Bache* on deep sea sounding and combined operations on approaches to Chesapeake Bay and Gulf of Mexico; stood a senior watch on charge of ship hydrography; also in charge of triangulation and launch hydrographic parties. (Active practice 5.2 years: Res. Ch. 22: Design 0.3). Refers to H. B. Campbell, R. L. Faris, E. R. Hand, F. H. Hardy, N. A. Melick.

LES, LINFORD SPEARING—176 Remsen St., Brooklyn, N. Y.—(Age 49. Born Philadelphia, Pa.)—1892 to 1899 first with I. P. Morris, Philadelphia, Pa., in drafting room on machine and engine design; Apprentice in pattern, foundry and machine shops; also on design, building and erection of Ridgewood Pumping Station, Brooklyn, N. Y.; then Draftsman and Engr. Asst. to Plant Engr., Wm. Cramp Engine & Shipbuilding Co., Philadelphia, on rebuilding and re-equipping of shipyard, boiler and machine shops, etc.; had full charge in erection of shipways for twin steamships *St. Louis* and *St. Paul*: 1899 to 1902 Draftsman and Engr., United Gas Improvement Co., on design of buildings and apparatus, engine, boiler and power plant installations, pumping plant, gas holders, etc.; designed in office and Engr. in charge in field on reconstruction of Philadelphia gas plant (several million dollars): Jan. 1902 to date with Brooklyn Union Gas Co., first 4 years as Asst. to Chf. Engr. and since then in exclusive charge, as Constr. Engr. of all gas-plant construction, reconstruction and maintenance and general buildings, including 7-story office building (cost about \$500 000), many branch office buildings, factories, warehouses, etc.; constructed several 5 000 000-cu. ft. gas holders with foundations and pumping stations with boilers, steam engines and high-pressure gas pumps (each 2 000 000 cu. ft. per hour, one station equipped with gas engine prime movers), also two 10 000 000-cu. ft. gas holders with foundations and 42-in., 36-in., 30-in. and 24-in. gas connections, also large pumping station building and boiler house at this station; has redesigned in office and in field, dismantled, altered and reconstructed five plants (some were coal-gas, all now water-gas plants); altered some buildings and enlarged and erected many new ones (brick and structural steel brick filled and some galvanized iron covered); designed and erected thirty-seven Williamson and four 3-shell water gas generator sets (each capable of 4 000 000 cu. ft. per day) with foundations and steam, oil, gas and blast connections, and has since redesigned and made changes to increase their capacity; installed many batteries of boilers, steam connections, etc., feed water pumps, steam separators, etc., also some waste heat boilers, water and steam measuring devices, and about 50 large engines; designed and erected purifiers, including building and connections (some cost about \$500 000), some with traveling cranes; designed and installed generators, motors, switchboards and wiring, also foundations for buildings and apparatus, including piles and waterproofing; had full charge of laying out and installing connections for gas (up to 42 in.), steam (high pressure and exhaust) and water, city water supply, fire hydrants, etc.; designed and erected many other gas plant buildings, appurtenances, etc., coal-handling and storage plants, large steel overhead ash pockets; designed and rebuilt many piers and many thousands of feet of wood

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and concrete dock, bulkheads, etc.; in a subsidiary electric plant designed and constructed foundations, buildings, large turbine-driven 5 000-kw. electric generators, condensers, water-cooling towers, spray basins, water softeners, transformers, switchboards, boilers and stokers and all other apparatus; had full charge of designing, drawing up of plans and specifications, calling for bids, placing of orders and closing of contracts (work involved about \$15 000 000) and of construction work in field. **(Active practice 30 years: Res. Ch. 24: Design 30).** Refers to W. T. Chevalier, F. L. Cranford, J. C. Meem, D. E. Moran, C. W. Staniford, J. Strachan.

STOKES, R C—214 Gulf Bldg., Houston, Tex.—(Age 29. Born Waxahachie, Tex.)—1911 to Nov. 1912 (1½ years) with his father as Supt. on sewers and incinerators; had charge of installing sewer system at Chandler, Okla., incinerators at Blackwell and Shawnee, Okla., and Marion, Ill.: Nov. 1912 to Sept. 1919 with Texas Power & Light Co., Dallas, Tex., 4 years as Draftsman on power and gas plants, water-works, etc. 1½ years Chf. Draftsman; and after April 1918 Chf. Draftsman, also Engr. in charge of mechanical construction (reported to Constr. Engr.); installed 5 000-kw. turbine and auxiliaries at McKinney Power Plant, filtration plant at Wichita Falls and other smaller buildings: Oct. 1919 to date Engr. with Robert J. Cummins, Cons. Engr. Houston, in office on design and supervised construction in field on various structures. **(Active practice 11.6 years: Res. Ch. 5.3).** Refers to R. J. Cummins, E. A. Fretz, D. Lee, W. H. Mead, J. B. Townsend, D. M. Wilson.

TIEBOUT, CHARLES RALPH—212 East Sugar St., Mt. Vernon, Ohio—(Age 40. Born Kalamazoo, Mich.) (A. B., Olivet, Mich., Coll., 1905; B. C. E., Univ. of Mich., 1910).—93 June 1910 to date with Mt. Vernon (Ohio) Bridge Co., Drafting Dept., as Structural Steel Detailer (1½ years), Structural Steel Checker (6½ years), laying out and designing details (2 years) and in charge of work (2½ years). **(Active practice 12.5 years: Res. Ch. 2.5: Design 4.5).** Refers to C. G. Conley, W. Dyer, E. C. Garlow, H. Kercher, J. D. K. Lyman, T. S. Needels, H. E. Riggs, C. J. Tilden, G. Waalkes, I. M. Wolverton.

VAN DER BOON, GEORGES FIRMIN JEAN—420 East 50th St., New York City—(Age 25. Born Brussels, Belgium.) (B. S. in C. E., Cooper Union, 1922).—Jan. 1917 to July 1918 Transitman, city surveying, Frank E. Towle & Son, New York City: July 1918 to Feb. 1919 Ammunition Inspector, U. S. Ordnance Dept.: Nov. 1919 to date Gen. Tester, (1) mechanical and electrical testing, New York Edison Co., New York City. **(Active practice 5.2 years).** Refers to W. E. Brown, F. E. Foss, G. Morrison, J. C. Riedel, C. T. Schwarze, J. P. J. Williams.

VON ABO, CECIL VIVIAN—Parys, Orange Free State, South Africa—(Age 27. Born Kroonstad, Orange Free State.) (B. Sc. in Civ. Eng., 1917, M. A. in Mathematics, 1918, and M. A. in Applied Mathematics, 1919, Univ. of Cape Town; Ph. D. in Civ. Eng., McGill Univ., 1922).—May to Oct. 1920 Field Engr., C. D. Howe & Co., Cons. Engrs., Port Arthur, Ont., on reconstruction of Port Colborne (Ont.) Grain Elevator, later on Designing Staff on design of Kaminishquia Pulp Mill, Port Arthur: Oct. 1920 to Sept. 1921 graduate work at McGill Univ.: Sept. 1921 to Sept. 1922 at Cornell Univ., on a thesis. **(Active practice 0.4 year: Res. Ch. 0.2: Design 0.2).** Refers to F. A. Barnes, R. D. French, C. D. Howe, H. S. Jacoby, H. M. Mackay.

WADSWORTH, DALE THOMPSON—63 Bond St., Dayton, Ohio—(Age 35. Born Pittsburgh, Pa.)—Jan. 1905 to Aug. 1909 Apprentice and detailing on highway and railroad bridges and viaducts, American Bridge Co., Ambridge, Pa.: Aug. 1909 to May 1910 with Heyl & Patterson, Inc., Pittsburgh, Pa., detailing on coal and ore bridges: May (9) to Sept. 1910 with Milliken Bros., Staten Island, N. Y., detailing on office buildings: Sept. 1910 to Feb. 1911 with King Bridge Co., Cleveland, Ohio, detailing and checking railroad bridges: Feb. 1911 to Oct. 1912 with Toledo (Ohio) Bridge & Crane Co., detailing and checking mill and office buildings: Oct. 1912 to March 1914 with Pittsburgh Bridge & Iron Works, Rochester, Pa., detailing and checking mill buildings and highway bridges: March 1914 to March 1917 Asst. Chf. Draftsman, Case Crane & Eng. Co., Columbus, Ohio, checking, estimating and designing on mill and office buildings and highway bridges: March 1917 to April 1919 with E. W. Clark Management Corporation, Columbus, designing steelwork for steam power plants and hydro-electric stations: April 1919 to April 1920 Chf. Draftsman, Case Crane & Eng. Co.: April 1920 to March 1921 with Heyl & Patterson, Inc., designing steelwork for coal and ore

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bridges: March 1921 to date Chf. Engr., Brookville (Ohio) Bridge Co. **(Active practice 17.8 years: Res. Ch. 7.8: Design 8.7).** Refers to C. M. Canady, C. B. Cornell, F. H. Eno, A. Larsen, R. G. Manning, J. J. G. Pitney, G. F. Sparhawk.

AKER, FRANK BATES—86 Bartlett Rd., Winthrop, Mass.—(Age 48. Born Traverse City, Mich.) (C. E., Univ. of Minn., 1897.)—June 1897 to Feb. 1898 Engr. and Chemist, Cleveland-Cliffs Iron Co., Gladstone, Mich., in charge of location and construction of logging railroad and chemist near and in plant of blasting furnace: Feb. 1898 to May 1899 Res. Engr., Great Northern R. R., in charge of construction of branch railroad, northern Minnesota, and Transitman: May to Sept. 1899 Res. Engr., Minneapolis & St. Louis R. R., in charge of construction, Iowa: Sept. 1899 to Feb. 1900 student, special course in mining, Massachusetts Inst. of Technology: Feb. 1900 to Jan. 1901 Asst. Engr., G. N. R. R., maintenance work, Head of Party in charge of construction of yards, terminals, ballasting, water supply, etc.: Jan. to May 1901 Chf. of Party on location of railroad in Alaska: 1901 to 1913 (11½ years) Asst. Engr. and Res. Engr., G. N. R. R., in direct charge of construction of \$3 000 000 double-track tunnel under City of Seattle and terminal yards; design and construction of several ore docks in Lake Superior at Superior, Wis.; in charge of design and construction of water supply, stations, terminal yards, railroad location and construction; from 1905 to 1913 Res. Engr. at Superior and St. Paul: Jan. 1913 to March 1914 private work, including location of boulevard in St. Paul for A. B. Stickney: March 1914 to July 1918 Special Engr. and Bridge Engr., Bay State St. Ry. Co.: July 1918 to March 1919 Engr. of Materials, Boston Army Base, with Fay, Spofford & Thorndike, Cons. Engrs.: April 1919 to date Engr. M. of W. and Chf. Engr., Eastern Massachusetts St. Ry. Co., Successors to Bay State System, in direct charge and Head of Eng. and Maintenance Dept. in construction and design. **(Active practice 25 years: Res. Ch. 21.7: Design 19.5).** Refers to J. E. Carty, A. W. Dean, H. W. Hayes, L. E. Moore, J. R. Rablin.

INEINSTEIN, JOSEPH—405 Lexington Ave., New York City—(Age 34. Born in Russia.) (C. E., Columbia Univ., 1910.)—1910 to date (12½ years) Draftsman, Surveyor, Designer and in charge of field work for New York Sewage Disposal Co., and Robinson & Wagner, Engrs. and Contrs., on design and construction of sewerage and water supply systems and sewage-disposal and water-purification plants, reinforced concrete tanks and reservoirs, pumping and purification machinery, roadwork and surveying; from 1910 to 1912 on sewerage system and sewage-disposal plant for Rockville Center, N. Y., including field work, surveys, site and location; office work, sewer design and design of pumping station and making profiles and drawings; also sewerage system and sewage-disposal plant for large estate near Indianapolis, Ind.; from 1912 to 1914 Chf. Designer on sewage-purification plant for City of Binghamton, N. Y., including all designs and drawings; from 1914 to 1916 on sewerage system and sewage-disposal plant for State Coll. of Rhode Island; also designs of numerous smaller plants; since 1916 on sewerage system and sewage-disposal plant for Federal Shipbuilding Co. and complete housing projects for New Castle, Del., Mays Landing for Bethlehem Loading Co. near Atlantic City, N. J., South Amboy, N. J., and town of Three Rivers near Quebec, Canada; work consisted of preliminary surveys for location, topographical drawings of territory, determination of site, layout of streets and landscape work, location of dwellings, community centers and other buildings, design of sewerage system and sewage-disposal plant, water-supply and water-purification system, including design and location of standpipe and reservoir, fire hydrants, etc., location of gas and electric systems and of trolley lines, and all other work for town layout, including designs and drawings, and filed data; design of sewerage systems and sewage-purification plant for Alan Wood, Iron & Steel Co. and of sewerage system and sewage-disposal plants for estate of J. F. A. Clark, Harrison, N. Y., and for Alton Beach, Fla.; also numerous other designs, including trestle at Mt. Vernon, pier for yacht club and tanks and reservoirs (all reinforced concrete), and design of masonry dam for water power. **(Active practice 12.5 years: Res. Ch. 10.5: Design 12.5).** Refers to J. F. Fairchild, H. P. Michener, G. L. Robinson, J. F. Sorzano, E. L. Wagner.

ULCOX, JAMES MELLICK—365 West 23d St., New York City.—Age 27. Born Montclair, N. J. (M. E., Stevens Inst. Tech., 1916.)—June to Dec. 1916 Asst. Engr., Wales Estates, Demerara, Ltd., Chf. of Party on surveys: Jan. to July 1917 Sec. Engr., Case Coast Protection Corporation, in charge of engineering and superintendent's work in construction of concrete sea walls and groynes on section of Demerara Sea Wall: Aug. 1917 to Feb. 1918 Transitman, Demerara Bauxite Co. in charge of party

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on topography, hydrography and railroad location: March 1918 to Aug. 1919 Lieut. (j. g.), U. S. N. R. F., on various ships and stations; Senior Asst. Engr., U. S. S. *Amphitrite*: Sept. to Dec. 1919 Transitman, Eng. Dept., Town of Montclair, engineering work, particularly paving and storm sewer construction: Jan. to Dec. 1920 Jun. Mech. Engr., Chile Exploration Co., in charge of field and laboratory experimental work in connection with plant economy of Tocopilla Power Plant: June to Sept. 1921 Senior Engr. Officer, U. S. S. *Eagle No. 59*, as Lieut. (j. g.), U. S. N. R. F., at sea: Nov. 1921 to Feb. 1922 Engr. in Chg., Consolidated Stone & Sand Co., prospecting and designing sand washing plant: March 1922 to date Designing Engr., Dept. of Public Works, Teaneck, N. J., particularly on street location and improvement and sanitary and storm sewering. **(Active practice 5.6 years: Res. Ch. 3.5: Design 0.9).** Refers to A. Diamanti, J. J. Hennebique, C. W. Hudson, T. Human, Jr., A. C. Humphreys, W. C. Parmley, R. S. Peotter.

WILSON, EDGAR KENNARD—917 Putnam Ave., Plainfield, N. J.—(Age 44. Born Southington, Conn.)—1898 to 1901 (2 years) Rodman and Transitman for E. C. Jordan, 100 C. E., survey and engineering office, Survey Asst., Inspector of masonry dam, North Gorham, Me.: 1901 Rodman and Levelman, Rumford Falls & Rangeley Lakes Ry. (1) (6 months); Instrumentman with C. W. Fenn, C. E. (about 4 months), surveying and engineering, in charge of triangulation survey: 1902 to 1903 (1½ years) Rodman and Draftsman, New Central R. R., Concrete Inspector, preliminary design, grade crossing eliminations, freight yards, engine yard layouts: 1903 to 1905 special student, Univ. of Maine: 1904 (about 4 months) Chf. of Party on location, Somerset Ry. Extension: 1905 to 1906 (1½ years) Asst. Engr., Philadelphia & Western Ry., in charge of construction, including about twenty reinforced concrete bridges, also some design on latter: 1906 to 1909 Transitman (5 months), Instrumentman (1 year) and Asst. Engr. (1 year), Panama Canal, in charge of estimates, Culebra Cut, in charge of office, Res. Engr., Central Div., design, railroad yards, trestles, suspension bridge, etc.: 1909 to 1911 (2 years) in private practice at Elgin, Ill., on surveys and municipal work, design and construction, sewers, pavements, etc.: 1911 (over 9 months) Asst. Engr., Portland (Me.) Water Dist., in charge of construction, section of 42-in. pipe-line: 1912 to date (except 5 months Capt., Engrs., U. S. Army) Asst. Engr., Prin. Asst. Engr. and Office Engr., The Pitometer Co., in charge of water-waste surveys, water-works design. **(Active practice 22 years: Res. Ch. 16.6: Design 1.9).** Refers to J. W. Ackerman, H. S. Boardman, E. D. Case, E. S. Cole, H. F. Hill, A. S. Zinn.

WOODWARD, HAROLD STONE—129 Highland Pl., Ithaca, N. Y.—(Age 23. Born Auburn, Mass.) (C. E., Cornell Univ., 1922)—July to Sept. 1922 Jun. Engr., U. S. Coast and 101 Geodetic Survey, current meter survey of New York Harbor and vicinity: Sept. 1922 to date Instructor in Bridges and Concrete, Coll. of Civ. Eng., Cornell Univ. **(Active practice 0.4 year).** Refers to F. A. Barnes, H. N. Ogden, J. E. Perry, F. J. Seery, L. C. Urquhart.

WRIGHT, ARTHUR WILLIAM—400 Convent Ave., New York City—(Age 43. Born Somers, N. Y.)—3 years student, Lehigh Univ.: 1902 to 1904 (2 years) Draftsman, Phoenix Bridge 102 Co., structural work: 1904 to 1908 Draftsman with Milliken Bros. (2 years); Checker with Post & McCord (6 months); Blacksmith, Metropolitan St. Rys. (6 months); structural (1) work: 1908 to 1922 with Eastern Steel Co., 4 years as Asst. Chf. Draftsman, structural work, and 10 years Structural Engr. in charge of estimating and designing, structural work: 1922 to date (over 1 month) Chf. Engr., Hamilton & Chambers Co., Inc., in charge of designing and drafting, structural work. **(Active practice 19.1 years: Res. Ch. 14.1: Design 10.1).** Refers to J. W. Hamilton, C. W. Hudson, F. H. Kinsey, C. W. MacCormack, R. D. Snodgrass, R. W. Tull.

ZAHLEN, JOHN VALFRID—Placerville, Cal.—(Age 41. Born Stockholm, Sweden.) (C. E., Strelitz Pol. Inst., Germany, 1906.)—1900 to 1903 (2½ years) Draftsman, Instrument 103 man and Foreman on construction with Engr., Swedish Royal Corps of Engrs., on water supply, sewers, railroads and surveying: 1907 and 1908 First Asst. Engr. on construction (13) with Magnus Hanson, Cons. Sulphite and Paper Mill Engr. on sulphite mills, harbor work, water power development and railroad construction: 1909 to 1910 (1½ years) Structural and Mech. Designing Draftsman with Sargent & Lundy, Mech. and Elec. Engrs., Chicago, Ill., steam-power plants, coal-handling plants, etc.: 1910 to 1911 (1½ years) First Designer and Field Surveyor on construction, Mineral Point Zinc Co., at Mineral Point, Wis., and De Pue, Ill., zinc oxide, power and acid plants: 1911 to 1916 (4½ years) Designer, later Designing Engr. in Chg., Harbor and Subway Comm.

FOR ADMISSION

19 Lieu of Chicago, on design of substructure and superstructure, Chicago municipal freight and U. S. S. pier, steelwork, breakwater, etc.: 1916 (9 months) Designer and Field Engr. engineering of Constr., German-American Portland Cement Co., La Salle, Ill., cement, raw mill, reinforced concrete cement storage, crusher building, etc.: 1917 and 1918 Engr. in charge of construction of water power plant, Frörfors Kraftpaper & Sulphate Mills Co., Sweden, 1 Senior design and construction of two water-power plants and reconstruction of mills: 1918 to Nov. 1920 (1½ years) Engr. in charge of design and construction of large water-power plant, Stockholm Superphosphate Mfg. Co., Ljunga Works, Sweden, power house, dams, Teaneek, sewerings, gas plant installations, piping, coal-handling plants, etc.: 1921 to date (1½ years) Diamant, Parmy, Structural and Hydr. Designer, Byllesby Eng. & Management Corporation, Chicago, structures for hydro-electric development for W. S. G. & Elec. Co., El Dorado Development. (Active practice 18.5 years: Res. Ch. 8: Design 8.5). Refers to J. Ericson, G. E. Gustafson, J. W. Pearl, L. E. Philbrook, W. B. Rittenhouse, E. C. Shankland.

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EMAN, JOHN HENRY, Assoc. M. AM. Soc. C. E.—Univ. of Michigan, Ann Arbor, Mich.—(elected Jan. 19, 1920.) (Age 30. Born Bad Axe, Mich.) (B. C. E., 1915, and C. E., 1922, Univ. of Mich.)—June to Oct. 1911, June 1912 to Oct. 1913 and Aug. to Oct. 1914 Inspector, U. S. Corps of Engrs., Sault Ste. Marie, Mich., until Oct. 1911 on drafting, surveying, inspection of construction and estimating; from June 1912 to Oct. 1913 on more responsible work, involving (for 1 year) preparation of construction estimates on new Third Lock; after Aug. 1914 drafting, surveying and inspection: July 1915 to Sept. 1919 with Michigan State Highway Dept., until Jan. 1916 as Engr. on design, surveys and inspection; then Office Engr., Asst. to State Highway Commr., in charge of administration of main office, and in charge of all surveys and estimates; and after Jan. 1918 Engr. in charge of Federal Aid Road construction: Oct. 1919 to date Asst. Prof. of Civ. Eng., and Director of State Highway Laboratory, Univ. of Michigan, in responsible charge of all inspection of materials for Michigan State Highway Dept. (Active practice 8.7 years: Res. Ch. 6.9: Design 2.2). Refers to L. M. Gram, H. E. Riggs, L. C. Sabin, L. C. Smith, J. T. Voshell.

EGGS, GEORGE ERLE, Assoc. M. AM. Soc. C. E.—Princeton, N. J.—(elected Junior Oct. 3, 1911; Assoc. M. Sept. 2, 1914.) (Age 39. Born Ashland, Ill.) (A. B., Northwestern Univ., 1905; C. E., Columbia Univ., 1910.)—1910 to 1911 (1½ years) Draftsman and Checker of stress sheets, American Bridge Co., New York City: Sept. to Dec. 1911 with A. B. Hager, Cons. Engr., as Checker and Designer of steel frame buildings: Dec. 1911 to June 1912 with W. J. Wilgus on valuation of Lehigh Valley R. R.; Asst. in New York office preparing quantity charts and summarizing reports from field: June 1912 to July 1914 Chf. Engr., Phosphate Min. Co., Nichols, Fla.: Sept. 1914 to date at Princeton Univ., until Sept. 1915 as Instructor in Civ. Eng., in charge of courses in Mechanics of Materials and Elementary Structural Design; from Sept. 1915 to Sept. 1921 Asst. Prof., and Sept. 1921 to date Associate Prof., of Civ. Eng., in charge of courses in Mechanics of Materials, Junior Structures and Senior Bridge Design; since Sept. 1922 also in charge of Materials Testing Laboratories. (Active practice 12.4 years: Res. Ch. 10.4: Design 2). Refers to H. C. Berry, W. H. Burr, F. H. Constant, O. E. Hovey, M. S. Ketchum, O. H. Landreth, G. Paaswell, E. H. Rockwell, C. H. Stengel.

ERRELL, GLENN SMITH, Assoc. M. AM. Soc. C. E.—Navy Yard, Brooklyn, N. Y.—(elected Aug. 31, 1909.) (Age 38. Born New Lexington, Ohio.) (C. E., Ohio State Univ., 1904.)—June to Sept. 1903 Asst. on Engr. Corps, E. and A. Div., Pennsylvania Lines, surveying and office work: July 1904 to Aug. 1907 with Mt. Vernon (Ohio) Bridge Co., until Feb. 1905 as Detail Draftsman on railway and highway bridges, building work, etc.; then made original layouts of railway and highway bridges, heavy and light building work, including railroad bridge (415-ft. span), designing all details and packing: Aug. 1907 commissioned Asst. Civ. Engr., U. S. Navy: Aug. 1907 to May 1908 Asst. to Engr. in Chg., at U. S. Navy Yard, Boston, Mass., various work on consolidation of power plants and on construction; June 1908 to Dec. 1911 Asst. to Engr. in Chg. on large new works at Naval Station, Pearl Harbor, Hawaii, including 5 000 000 cu. yd. of channel dredging, and 2 years on construction

FOR TRANSFER

of 1 095-ft. dry dock (total \$6 500 000); responsible for computations and estimates of quantities; 6 months in charge of preliminary work in field; 9 months Acting Engr. in Chg. of entire work; Jan. 1912 to May 1913 Asst. to Public Works Officer, Navy Yard, Norfolk, Va., on various construction, sea wall, 60-ton crane, etc.; May to Nov. 1913 and March to Dec. 1914 Prin. Asst. to Engr. in Chg. at Navy Yard, Boston, on construction of buildings, road, crane, power-plant work, etc.; Nov. 1913 to March 1914 Engr. in Chg. at Navy Yard, Portsmouth, N. H., constructing sea wall (45-70 ft. water), 4-span railroad and highway bridge, buildings, etc.; Jan. 1915 to Aug. 1916 Asst. to Engr. in Chg., Naval Station, Pearl Harbor, Hawaii, on construction of various works, made calculations and prepared alternate design for head and caisson sections, 1 095-ft. dry dock, also pumpwell for same; became Senior Lieut.; Sept. 1916 to June 1917 Engr. in Chg., Naval Station, Guam, M. I., in charge of construction of two 400-ft. radio towers, numerous roads in difficult country, buildings, power-plant improvements, etc.; Aug. to Oct. 1917 in Bureau of Yards and Docks, Navy Dept., in connection with overseas war construction of air stations, etc.; Oct. 1917 to Dec. 1919 Engr. in Chg. at New London, on construction of submarine base and ammunition depot, ten piers, dredging, sea wall, numerous buildings, power plant (6 500 h. p.), distributing systems, railroad trackage, etc. (total \$5 000 000); March 1919 became Commander; since Jan. 1920 Engr. in Chg. at Navy Yard, Charleston, S. C., on construction of reinforced concrete pier (\$200 000), power-plant improvements (\$250 000) and various buildings, paving, etc. (Active practice 18.4 years: Res. Ch. 7.7: Design 8). Refers to R. E. Bakenhus, L. M. Cox, F. R. Harris, C. W. Parks, D. C. Webb.

CLARKE, WILLIAM DEXTER, Assoc. M. Am. Soc. C. E.—835 Union St., Salem, Ore.—(elected July 10, 1907.) (Age 43. Born Tacoma, Wash.) (B. A., Amherst Coll., 1902; 107 S. B., Mass. Inst. Tech., 1905.)—June to Sept. of years 1894, 1895, 1898, 1899 and 1900 and June 1896 to Sept. 1897 Axeman, Chairman, Rodman and Instrumentman on (12) water-works and railroad construction and location, City of Portland, and various railroads in Pacific Northwest: June 1902 to Aug. 1903 Instrumentman and Res. Engr. on railroad construction, Oregon Water Power & Ry. Co. (now Portland Ry., Light & Power Co.); July 1905 to June 1906 Asst. Engr., Oregon & Eureka R. R. Co. (now Northwestern Pacific) on maintenance, construction and location: July 1906 to Dec. 1907 Asst. Engr., Western Pacific Ry. Co., on construction, in charge of 25 miles of heavy mountain construction, including 6 000-ft. tunnel: Feb. 1908 to July 1909 Asst. Engr. with Hegardt & Brown, Cons. Engrs., Portland, Ore., general practice in municipal improvements, river and harbor improvements, docks, logging and electric railways, etc.: Aug. 1909 to May 1914 member of firm, Hegardt & Clarke, Civ. Engrs., Portland, designed and supervised construction of street improvements, water and sewer systems, etc. (aggregate \$450 000), irrigation, railroad and miscellaneous surveys, reports and designs: May 1912 to Nov. 1913 Chf. Engr., Silver Falls Timber Co., Silverton, Ore., located and constructed 25 miles main line railroad and logging spurs, yards, railway, etc.: May 1915 to April 1916 Dist. Engr., Oregon State Highway Comm., assigned as County Highway Engr. of Jackson County, in charge of highway location and construction under \$500 000 county bond issue: May 1916 to March 1917 Asst. Engr., Oregon State Highway Comm., on supervision of state highway location and construction in Western Oregon: July 1917 to Feb. 1920 (except Sept. 1917 to July 1919 on leave of absence) Engr., Dept. of Rys., Public Service Comm. of Oregon, valuation and administrative work: Sept. 1917 to July 1919 Capt., Corps of Engrs., U. S. Army, with 23d Engrs. (Highway), 1½ years with A. E. F. in Zone of Advance, France, on road maintenance, repair and construction: March 1920 to date Div. Engr., Oregon State Highway Comm., in charge of all state highway work in eight counties (construction work supervised aggregated \$6 200 000). (Active practice 18.2 years: Res. Ch. 15.7: Design 9.4). Refers to W. G. Brown, C. J. Green, G. B. Hegardt, R. D. Hoyt, J. Q. Jamieson, R. A. Klein, J. H. Lewis, C. L. McKesson, H. Nunn.

CLEVELAND, HENRY BURDETT, Assoc. M. Am. Soc. C. E.—East Schodack, N. Y.—(elected May 31, 1910.) (Age 45. Born Schenectady, N. Y.) (B. E., Union Coll. Eng. 108 School, 1902.)—April 1895 to July 1902 First Asst. to City Engr., Amsterdam, N. Y., had direct charge (under City Engr.) of design and construction, including street grading, (3) surveys, paving, sewerage and sewage disposal works, dams, bridges, structures, retaining walls and railways; had entire charge of all field work and assisted in design of systems of sewerage and sewage disposal for Canajoharie, Ft. Edward, Cuba, Norwood and Rochester, N. Y.; also in private practice on surveys, water-power development on

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Schoharie Creek at Mill Point and Gilboa, railroad surveys and construction: July 1902 to Dec. 1905 Prin. Asst. Engr. to Olin H. Landreth, Cons. Engr., Schenectady, N. Y., assisted in design of sewage disposal works for State Training School for Girls, Hudson, N. Y., Newark (N. Y.) Custodial Asylum, Saranac Inn, N. Y., Dutchess County (N. Y.) Alms House; designed sewerage systems and sewage disposal works for Dolgeville, Skaneateles, Onondaga County Penitentiary, Jamesville, N. Y., and Columbia Hall, Lebanon Springs, N. Y.: Dec. 1905 to Dec. 1919 Prin. Asst. Engr., New York State Dept. of Health, assisted Chf. Engr. in planning and executing work of San. Eng. Div., comprising investigations and reports concerning water supply, water purification, sewerage and sewage disposal for municipalities, examination of plans for water supply, sewerage and sewage disposal, investigation of sanitary condition of state institutions, stream pollution and public nuisances; had direct charge of examination of from 100 to 125 plans for sewerage and sewage disposal annually and of investigation of shellfish grounds pollution in the State; prepared report on sanitary investigation of Susquehanna River Watershed; has lectured on sanitary engineering and public health at Cornell and Syracuse Univs., New York Medical Coll. and Albany Medical Coll.; Expert Witness in court cases involving stream pollution, public water supply, public nuisances and water power: Dec. 1919 to date Secy. and Cons. Engr., Barth Eng. & San. Co., has investigated sewage-disposal conditions in Europe and carried out extensive tests of sewage-disposal machinery in Milwaukee and Baltimore. (Active practice 27.5 years: Res. Ch. 22.5: Design 15). Refers to F. E. Crane, H. P. Eddy, T. C. Hatton, O. H. Landreth, G. I. Oakley, H. N. Ogden, D. J. Shaw.

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EE, WILLIAM CLARK, Assoc. M. AM. Soc. C. E.—Gettysburg, Pa.—(elected June 3, 1915) (Age 39. Born Washington, Ohio.) (B. S., Washington and Jefferson Coll., 1905)—1905 to 1906 (6 months) Inspector on lock and dam construction, Ohio River, concrete and piling foundation, Corps of Engrs., U. S. Army, and 1906 (3 months) Inspector on breakwater construction, Cleveland and Ashtabula Harbors: 1906 to 1909 (2½ years) on construction of docks and ore-handling machinery for Pennsylvania Co. at Ashtabula Harbor (\$3 000 000 project): 1909 to 1911 (2 years) Chf. Engr., Erie Dock Comm., in charge of design and construction of public steamboat landing at Port of Erie: 1911 to 1913 (1 year) Party Chf. on road surveys, and 1913 to 1915 (1 year) Supt. of Maintenance, Pennsylvania State Highway Dept.: 1915 to 1919 (3 years) Asst. Engr. in charge of Dist. No. 15, both as to design and construction; has had supervision over construction of about \$3 000 000 worth of roads of all types: 1919 to date with Pennsylvania State Highway Dept., 3 years as Asst. Constr. Engr. having general supervision of design and construction over Dist. Engrs. covering about one-third of construction work of State during expenditure of over \$100 000 000; at present Dist. Engr. in charge of maintenance, design and construction of highways of Dist. No. 6, at Gettysburg. (Active practice 13.2 years: Res. Ch. 10.5: Design 8). Refers to G. H. Biles, H. E. Hilts, J. W. Hunter, S. W. Jackson, J. S. Ritchey, P. M. Tebbes.

EEEMAN, WILLIAM BRADLY, Assoc. M. AM. Soc. C. E.—311 Engineers Bldg., Denver, Colo.—(elected Dec. 3, 1912.) (Age 39. Born Bozeman, Mont.) (B. C. E., Mont. State Coll., 1903; C. E., Cornell Univ., 1905)—July-Oct. 1902 Rodman, U. S. Reclamation Service: July-Oct. 1903 Planetary Traverseman, U. S. Geological Survey: Nov. 1903—Sept. 1904 with U. S. Reclamation Service, 5 months as Hydrographer in Milk River Valley, Mont., and 6 months Eng. Aid on stream gauging in Montana: July 1905 to April 1907 Eng. Aid, U. S. Reclamation Service, until July 1906 on stream gauging and special canal studies in Milk River Valley, including flood reports; then on canal and other construction, St. Mary Lakes, Mont., and after Jan. 1917 on construction of Corbett Tunnel, Wyo.: May 1907 to Dec. 1911 Dist. Engr., Denver Dist. Water Resources Branch, U. S. Geological Survey, in charge of stream gauging in Colorado, Nebraska, New Mexico, Oklahoma, Eastern Utah and Southern Wyoming; also numerous reports on classification of public lands, right of way over public lands for proposed power and irrigation canals, reservoirs, etc.: Jan. to Nov. 1912 in private practice as Hydr. and Irrigation Engr. in Denver, on surveys and plans for Tucumcari Irrigation Project, N. Mex. (25 000 acres); surveys and preliminary plans for irrigation of Bell Ranch, N. Mex. (100 000 acres); report and expert testimony on water supply of Costilla River, N. Mex., for Costilla Estates Development Co. (Colorado); report on water supply available for irrigation from Red River near Questa, N. Mex.; water supply from Huerfano River above Badito, Colo.; special work for Interstate Land & Development Co. on Ute Creek Project, N. Mex.; also special inspections of dams, etc., for State

FOR TRANSFER

Engr. of New Mexico: Dec. 1912 to June 1916 with Siamese Govt. at Bangkok, Siam until Dec. 1914 as Prin. Superintending Engr. in Dept. of Ways of Communication then Superintending Engr. in Royal Irrigation Dept. on staff of expert irrigation engineers from British India; investigated irrigation projects in the Kingdom and made reports on improvement of many channels; reports on use of navigation canals for irrigation and on highway systems, improvements and extensions for Provinces of Monthon Rajasima and Monthon Payab; general supervision of lock and sluice gate construction (masonry and concrete); reports and surveys on proposed water-work systems for cities of Korat and Chiangmai; surveys and preliminary plans for Petchaburi Irrigation Project (100 000 acres), including drainage of Somorebang tidal swamp (30 000 acres); report, surveys and plans for the Lampang Irrigation Project (20 000 acres), Huey Me Oan Cut-Off Irrigation Project and dozens of small projects; assisted British Engrs. in preparation of scheme for irrigation of 2 500 000 acres in Lower Menam Valley and outlined schemes for irrigation of Hill Provinces aggregating 500 000 acres; June 1916 to Aug. 1917 in private practice as Cons. Engr. in Denver, until March 1917 acting as Expert Witness for City of Pueblo in connection with litigation on Fountain Creek underflow; March-July 1917 farming in Montana; Aug. 1917 Costkeeper for U. S. Reclamation Service on Sherburne Lakes Dam, Mont.: Sept. 1917 to July 1919 with Engr. Corps, U. S. Army; 2 months Capt., E. O. R. C., 2d Training Camp, Ft. Leavenworth, and 4 months Capt. C. O., Co. A, 509th Engrs., Camp Travis; Feb. 1918 to June 1919 with A. E. F. in France, until July 1918 commanding Co. A, 509th Engrs., and from July 1918 to June 1919 Acting C. O. and Major commanding 509th Engrs.; Officer in charge of construction Plessis Filter Plant, St. Nazaire (3 m. g. d.) (April-Sept. 1918) and in charge of construction, Montoir Filter Plant (one m. g. d.), B. S. No. 1 (Sept. 1918-March 1919): Aug. 1919 to date Branch Mgr., Denver office, Lock Joint Pipe Co., in charge of manufacture of reinforced concrete pipe for water lines, sewers, culverts, etc.; designs, estimates, bidding on contracts, cost-keeping, management and administration; in charge or responsible connected with work involving expenditure of approx. \$1 000 000, including manufacture and installation of pressure pipe-lines. (Active practice 18.5 years: Res. Ch. 14.8: Design 3). Refers to L. E. Bishop, H. S. Crocker, S. Fortier, J. Jacobs, E. C. LaRue, A. N. Miller, H. M. Morse.

GILLESPIE, CHESTER GORDON, Assoc. M. AM. Soc. C. E.—4136 Manila Ave., Oakland, Cal.—(elected Junior Sept. 6, 1910; Assoc. M. May 6, 1914.) (Age 36. Born Hollister, 111 Cal.) (B. S., Univ. of Cal., 1907.)—May to Aug. 1907 Inspector on construction, Aug. 1907 to Jan. 1908 Operator in, and Jan. to April 1908 in field charge of, experimental (13)filtration plant, Peoples Water Co., Oakland, Cal.: April to July 1908 Field Investigator, U. S. Irrigation and Drainage Investigations, reporting on irrigations in Arizona: Sept. 1908 to May 1909 Chf. Engr., Smith Emery Co., San Francisco, Cal., surveys and mapping: July 1909 Chf. of Party, Sacramento Valley Irrigation Co., Willows, Cal., leveling, ditch location, etc.: Oct. 1909 Designer with Chas. G. Hyde, filtration plant plans: March 1910 Chf. of Party with J. C. Boyd, on levee location and levels: April 1910 to Aug. 1911 Asst. Engr. with Chas. G. Hyde, on design of water sterilizing plants, construction of 550 000-gal. swimming pool: Oct. 1911 to March 1912 Foreman and Cost Data Clerk, City of Minneapolis Filtration Plant: May to Sept. 1912 Asst. Engr. with Messrs. Hyde, Marx, Grunsky and Freeman, San Francisco Water Supply investigations: Oct. to Dec. 1912 Filtration Engr., H. M. Byllesby Co., tuning up filter at Albany, Ore.: Dec. 1912 to March 1913 Asst. Engr., California State Board of Health, river pollution surveys: March to June 1913 Asst. Engr. with Geo. W. Fuller, Cons. Engr., New York City, on design and studies of sanitary works: June 1913 to Aug. 1914 Res. Engr. for Fuller & Pearse, Evanston, Ill., Filtration Plant: Aug. 1914 to March 1915 Supt., City of Evanston, same plant: March to Aug. 1915 Asst. Engr., Sacramento, Cal., design of sewage screens: Aug. 1915 to Nov. 1919 Director, Bureau of San. Eng., State Board of Health, Berkeley, Cal., supervision, design and promotion of sanitary engineering works: Nov. 1919 to July 1922 Res. Engr., City of Sacramento, on design and construction, \$2 700 000 filtration and pumping works: July 1922 to date in private practice of sanitary engineering as Cons. Engr. (Active practice 14.9 years: Res. Ch. 12.1: Design 3.6). Refers to W. W. DeBerard, C. Derleth, Jr., G. W. Fuller, C. G. Hyde, L. Pearse.

HOSKINS, JOHN KURTZ, Assoc. M. AM. Soc. C. E.—Third and Kilgour Sts., Cincinnati, Ohio—(elected Oct. 7, 1914.) (Age 38. Born New Holland, Pa.) (B. S. in Civ. Eng. 112 1905, and C. E., 1910, Pa. State Coll.)—Aug. 1905 to Jan. 1908 Asst. Engr., American

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Pipe Mfg. Co., Philadelphia, Pa.; Res. Engr. on design and construction of storage and distributing reservoirs, field surveys and reconnaissance for water supply systems for Pennsylvania R. R.: Feb. 1908 to June 1909 took special studies in water treatment and water biology, Hygienic Inst., Univ. of Berlin, Germany: Aug. 1909 to April 1911 Asst. Engr. with Alexander Potter, Cons. Engr., New York City, field surveys, design of water supply and sewerage systems, reports, etc., designed tunnel trunk system of sewers for Edmonton, Alberta; assisted in design and built municipal water softening plant for Georgetown, Ky.: May to Nov. 1911 Res. Engr. for City of Owensboro, Ky., on construction of Municipal water softening plant: Dec. 1911 to March 1912 Asst. Engr. with Chester & Fleming, Cons. Engrs., Pittsburgh, Pa., Design Asst. on municipal filter plant for Erie, Pa.: June 1912 to Dec. 1913 Asst. and later Div. Engr., on construction of improved water-works for City of Akron, Ohio, field surveys, plans, Operator of experimental filtration plant, Div. Engr. in charge of construction of 36-in. steel force main (12 miles long, cost \$450 000): Jan. 1914 to date San. Engr., U. S. Public Health Service, investigations of stream pollution, Ohio River, sanitary surveys large number of cities in central and eastern states, charge of malarial control and sanitation activities of extra-cantonment zones of Camp Wheeler and Camp Sheridan; designed and executed major drainage operations (cost over \$150 000); later in charge of all Public Health Service activities extra zone, Camp Benning, Columbus, Ga.; organized local health department, effected sanitation of city; in charge of stream pollution studies, Illinois River, designed, organized and conducted all field studies extending over 2 years; at present Officer in Chg., Cincinnati Station stream pollution studies of the Service. (Active practice 15.5 years: Res. Ch. 7.6: Design 7.9). Refers to F. A. Barbour, E. G. Bradbury, G. G. Dixon, L. M. Fisher, R. L. Kell, J. V. McNary, L. Pearse.

TON, MURRAY LEE, ASSOC. M. AM. SOC. C. E.—909 Kellogg Ave., Ames, Iowa—(elected June 23, 1916.) (Age 36. Born in Washington County, Iowa.)—Sept. 1905 to June 1907 and Aug. 1908 to May 1909 student, Civ. Eng. course, Iowa State Coll.: June 1907 to March 1908 Axeman and Rodman (over 3 months), Timekeeper and Inspector on track-laying (4 months) and Material Clerk (1½ months), and April to July 1908 Chainman, Chicago, Milwaukee & St. Paul Ry., Pacific Coast Extension: May 1909 to Aug. 1910 Rodman (1 month) and Masonry Inspector (1½ years), Great Northern Ry., M. of W. Dept., Minot Dist.: Sept. 1910 to Dec. 1911 Asst. Engr. under Floyd Goodrich, Humboldt, Iowa, on county drainage work, surveys, assessment computation, etc.: Jan. 1912 to Jan. 1915 County Engr., Louisa County, Iowa, in charge of levee, drainage, road and bridge work: Jan. to June 1915 in private practice at Wapello, Iowa, surveys, drainage work, etc.: June 1915 to Jan. 1916 Asst. Engr., Central States Eng. Co., Muscatine, Iowa, surveys, drainage work, city plats, etc.: Jan. 1916 to Aug. 1918 County Engr., Des Moines County, Burlington, Iowa, in charge of design and construction of road and bridge work: Aug. 1918 to June 1919 Mgr. of hardware store, Halleck, Minn., estate of A. W. Johnson: June 1919 to date Asst. Engr. of Road Administration, Iowa Highway Comm., Ames, Iowa, preparation of project statements and estimates; culvert and road design (both checking and recommendations); special assignments on surveys and investigations; work has involved making field examination, as Central Office Representative, of plans for 642 miles of road improvement (to cost approx. over \$4 500 000); reconnaissance survey of 125 miles of highway (estimated cost of improvement over \$780 000); checking and making numerous recommendations for bridge and culvert designs and several special studies and investigations, among others being survey, design and specifications for river regulation work (estimated cost approx. \$15 000). (Active practice 13.5 years: Res. Ch. 10.3: Design 4.2). Refers to T. R. Agg, G. L. Campen, C. C. Coykendall, J. S. Morrison, W. J. Schlick.

DAN, JAMES CAREY, ASSOC. M. AM. SOC. C. E.—301 Court House, Pittsburgh, Pa.—(elected April 2, 1913.) (Age 38. Born Newport, Va.)—June 1902 to March 1903 Draftsman, Fidelity Title & Trust Co., plans of lots and property plotting of deeds in abstracts of title for insurance: March 1903 to Feb. 1904 Draftsman and Transitman with E. L. Farren, C. E., general engineering: July to Dec. 1904 Inspector and Estimator with C. H. Wright, C. E., Receiver appointed by U. S. War Dept. to complete contract of Evansville Cons. Co. for Lock No. 18, Ohio River, inspected foundations for lock and guide walls. Foreman on excavation, made classification estimate of cost of project: Dec. 1904 to March 1905 Draftsman, Harbison & Walker, on design, detail plans and estimates of cost of blast furnace stacks, coke ovens, etc., detail of buildings of Mt. Union Plant and designed shafting for driving machinery of plant: March 1905 to Jan. 1906 Transitman in charge of party with E. L. Farren, in complete charge of

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the business in his absence, surveys of city property, plans of lots, building construction, development of town of Fair Oaks, design and construction of streets, sewer system and water lines: Jan. 1906 to Feb. 1907 Rodman and later Acting Res. Engr., Northern Pacific R. R., Yellowstone Div., maintenance of way and railroad preliminary, construction of turntables, coal docks, extension of yards and roundhouses, spur lines, passing tracks, etc.: Feb. to July 1907 Asst. City Engr., Glendive, Mont., and Deputy County Surveyor, Dawson County, Mont., had full charge of relaying about 5 miles of water lines, construction of about 5 miles of sewers and pumping plant, street improvements, map of county, bridge surveys and repairs, small irrigation plant: Oct. 1907 to Oct. 1908 Asst. Engr. with E. L. Farren, work similar to that between March 1905 and Jan. 1906: Oct. 1908 to Dec. 1919 Draftsman and Chf. Draftsman, County Engr.'s Office, Allegheny County, Pa., designed or assisted in design of about fifty bridges (cost \$5 000 to \$50 000 each), assisted in design of substructure of Bridge No. 1, Monongahela River (\$240 000), Bridge No. 1, Ohio River (\$500 000), sewage-disposal plant, Woodville, surveys of property, roads and bridges; topographic surveys; has represented the County as Engr. before Grand Jury and Board of Viewers in damage cases, charge of preparation of plans for submission to U. S. War Dept. for bridge permits: Jan. to March 1920 Asst. Chf. Engr. with George Schwan, Archt., in charge of engineering office and design of housing development and utilities: March 1920 to date Chf. Draftsman, County Engr.'s Office, Allegheny County, similar work to that between Oct. 1908 and Dec. 1919, preliminary designs of Bridge No. 1, Jack's Run (estimated \$300 000 to \$800 000), various studies for raising and reconstructing the Allegheny River Bridges, etc.: Registered Professional Engr. and Land Surveyor, State of Pennsylvania. (Active practice 20 years: Res. Ch. 17.6: Design 17.1). Refers to J. T. Barr, V. R. Covell, C. S. Davis, S. D. Foster, A. B. McGrew, C. J. Tilden.

MACDOWELL, ROLLIN FAY, Assoc. M. AM. Soc. C. E.—3163 Sycamore Rd., Cleveland Heights, Ohio—(elected Oct. 10, 1916.) (Age 36. Born Columbus, Ohio.) (C. E., Ohio

115 State Univ., 1909)—June to Sept. 1909 Eng. Asst., City of Columbus, Ohio, on construction of garbage reduction plant: Sept. 1909 to March 1913 Asst. Engr., Ohio State

(9) Board of Health, 1 year as Asst. on special investigation of methods of collection and disposal of municipal wastes; 2½ years on investigations of and reports on proposed and existing public water supplies, sewerage systems and sewage-treatment plants: March 1913 to Feb. 1920 Prin. Asst. Engr. to R. Winthrop Pratt, Cons. Engr., Cleveland, Ohio, in responsible charge of investigations, reports, design, specifications and construction of sewerage systems, water-works, sewage-treatment, water-purification and garbage-reduction plants and flood-prevention works, involving about 25 cities and villages and aggregating \$5 000 000; during 1917 and 1918 Res. Engr. in charge of engineering work at Camp Sherman, National Army Cantonment, for Mr. Pratt, Project Engr., involving water and sewer systems, roads, drainage and operation (\$2 500 000): Feb. 1920 to Feb. 1921 on similar work, also town planning, as Div. Engr. with Morris Knowles, Inc., Engrs., in charge of engineering work, Cleveland office: Feb. 1921 to date County San. Engr., Cuyahoga County, Ohio, organized department, made surveys and prepared plans of water and sewer systems (estimated cost several million dollars), and constructed part of this work (cost \$1 200 000), including pumping stations, concrete reservoir, water and sewer mains, etc., responsible for work, designing, constructing, computing assessments and determining financial and legislative policies. (Active practice 13.5 years: Res. Ch. 12.3: Design 8.8). Refers to W. H. Dittoe; M. Knowles, I. S. Osborn, A. O. Rose, M. R. Scharff, W. A. Swallow.

McCOLLOUGH, CHARLES ANDREW, Assoc. M. AM. Soc. C. E.—2 Rector St., Room 1426, New York City—(elected Nov. 28, 1916.) (Age 39. Born Wilson, Kans.)—Sept. 1901

116 to March 1903 Apprentice, Draftsman and Rodman, Bethlehem (Pa.) Steel Co.: March 1903 to Sept. 1904 Draftsman and Instrumentman, Lehigh Valley R. R. Co., Bethlehem,

(1) Office of Engr. M. of W. and Div. Engr., cement testing, designing track standards and surveying: Sept. 1904 to Aug. 1905 Draftsman, Central R. R. of New Jersey, Jersey City, N. J., office of Chf. Engr., design of track standards, pier and dock work: Aug. 1905 to July 1909 Draftsman and Designer, New York Central & Hudson River R. R. Co., office of Designing Engr. and Terminal Engr., design and estimates, track layouts, structures, reinforced concrete arches, etc., and surveys: July 1909 to April 1916 Eng. Draftsman and Designer, Grade 9, Public Service Comm., 1st Dist., New York City, office of Designing Engr., designs and estimates of subway structures, including White-hall-Montague Tunnel, Route 33, Sec. 2: April 1916 to Sept. 1917 Structural Engr.

Bethlehem ways; also Div., J. G. plant build 1921 to date City; Cont practice 2 Chevalier,

SHALL, I York City—May 1907 and municip W. Leavitt Estates, N Club, in c golf cours for Villag on real-es Charles W vey in Sch estate lay design for age syste Party, Loc in charge calculation estate dev lots; topo N. Y., inc assisting including Design 5 C. E. D.

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Bethlehem Steel Co., office of Chf. Engr., designed large mill buildings and crane runways; also reinforced concrete furnace pit: Sept. 1917 to Nov. 1921 Engr., Structural Div., J. G. White Eng. Corporation, New York City, on supervision of design of industrial plant buildings and foundations, including Nitrate Plant No. 1, Sheffield, Ala.: Dec. 1921 to date Mgr., New York City office, Pittsburgh Bridge & Iron Works, New York City; Contr. Engr., industrial plant buildings, power houses, coal tipplers, etc. (Active practice 20.4 years: Res. Ch. 9.7: Design 8.7). Refers to L. E. Ashbaugh, W. T. Chevalier, C. M. Holland, W. H. Hunt, S. R. Jones, F. C. Noble.

SHALL, LESLIE STANCLIFFE, Assoc. M. AM. Soc. C. E.—18 East 41st St., New York City—(elected May 12, 1919.) (Age 34. Born Kingston, Jamaica.)—Aug. 1905 to May 1907 Rodman and Transitzer, Isthmian Canal Comm. on Panama Canal, surveys and municipal work: June 1907 to Dec. 1910 Transitman and Chf. of Party for Charles W. Leavitt on surveys, real-estate developments and country club layouts (Long Beach Estates, N. Y., in charge of streets, sewer and water mains; Rumson, N. J., Country Club, in charge of laying drains, water, roads, bulkhead and dredging, polo fields and golf course): April 1911 to Aug. 1913 in charge of construction of sewerage system for Village of Hempstead, N. Y., for C. E. Marshall, also surveys and lot calculations on real-estate developments and road building: Aug. 1913 to Sept. 1918 in charge for Charles W. Leavitt on construction of park at Saratoga Springs, N. Y., topographical survey in Schenectady, N. Y., park layout in Philadelphia, topographical surveys and real-estate layouts in Cincinnati, Ohio, real-estate layout and in charge of construction and design for Midvale Steel Development at Coatesville, Pa., including roads, water, sewerage system and disposal, surveys and lot calculations: Oct. 1918 to July 1919 Chf. of Party, Lockwood, Green & Co., at Camden, N. J., in building of war village (Fairview), in charge of laying sewers, water, drains and concrete roads, staking buildings and lot calculations: Aug. 1919 to date in charge of work for Charles W. Leavitt on real-estate development on Long Island, including construction of roads and calculations of lots; topographical surveys and real-estate layouts at Bridgeport, Conn., and at Harrison, N. Y., including (for latter) calculation of roads and lots and laying of water mains; assisting in design of sewage-disposal plant on Long Island, and other office work, including drafting, estimating and designing. (Active practice 16.5 years: Res. Ch. 12.2: Design 5). Refers to E. W. Clarke, J. H. Glander, Jr., C. W. Leavitt, H. M. Lewis, C. E. D. Marshall, M. W. Weir, R. W. Wells.

RDOE, WILLIAM SPRAGUE, Assoc. M. AM. Soc. C. E.—Civ. Eng. Dept., Univ. of Pennsylvania, Philadelphia, Pa.—(elected April 19, 1920.) (Age 41. Born Toronto, Ont., Canada.) (Ontario School of Practical Sci., 1904; B. A. Sc., 1906, and C. E., 1920, Univ. of Toronto.)—Dec. 1897 to Dec. 1898 Tracer and Draftsman, Polson Iron Works, Toronto, Ont.: Dec. 1898 to Sept. 1900 Draftsman on pumps, etc., and May to Sept. 1902 Layer Out in shop, Northey Mfg. Co., Toronto: May to Sept. 1901 Draftsman, The Economical Gas Apparatus Constr. Co., Toronto: May to Sept. 1903 and May 1904 to Sept. 1905 Draftsman on pumps, etc., and May 1906 to Sept. 1908 Hydr. Engr., Canada Foundry Co., Toronto: Sept. 1908 to Sept. 1909 Demonstrator in Hydraulics, Univ. of Toronto, in charge of design of hydraulic and thermodynamic laboratories: Sept. 1909 to Sept. 1911 Instructor in, Sept. 1911 to Sept. 1920 Asst. Prof. of, and Sept. 1920 to date Prof. of, Hydraulics, Univ. of Pennsylvania: summers 1909 to 1915 Res. Engr. on construction in Burlington, Oakville, Oshawa, Midland and High River for Willis Chipman, Toronto; since 1916 also Cons. Hydr. Engr., Birkenbine Eng. Offices, Philadelphia: Registered Engr., State of Pennsylvania. (Active practice 20.9 years: Res. Ch. 5.7: Design 16). Refers to H. C. Berry, W. Easby, Jr., E. T. Grandlienard, M. S. Ketchum, J. W. Ledoux, E. H. McHenry.

WLING, GEORGE FRANKLIN, Assoc. M. AM. Soc. C. E.—1432 S. Penn Sq., Philadelphia, Pa.—(elected April 4, 1906.) (Age 43. Born Lewistown, Pa.)—1896 to 1897 (1 year) Draftsman, Philadelphia (Pa.) Eng. Works: 1897 to 1901 (4 years) detailing, checking and laying out work, Pencoyd Iron Works, Philadelphia: 1901 to 1903 (2 years) Squadmaster, New York Shipbuilding Co., Camden, N. J., ship hulls, in responsible charge of preparation of all drawings for detailing, fabricating and constructing the work: 1903 to 1906 (3 years) Asst. Engr., Philadelphia Rapid Transit Co., elevated railway: Feb. 1906 to Feb. 1908 Contr. Engr., Belmont Iron Works, Philadelphia, designing various classes of buildings and bridges and negotiating and closing contracts: 1908 to 1911 (3 years) member of firm and Gen. Mgr., Bergdall & Pawling, Contrs. and Engrs., Philadelphia, designing and contracting for structural steel bridges and build-

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ings: 1911 to date Gen. Mgr., Geo. F. Pawling & Co., Engrs. and Contrs., directed all activities of Company on approx. \$15 000 000 worth of work; directed all matters pertaining to design of six apartment houses in Philadelphia, various manufacturing plants and loft buildings, design of entire shipbuilding, foundry and machine plant for Pusey & Jones Co. of Wilmington, Del., entire plant of Pennsylvania Shipbuilding Co. and New Jersey Shipbuilding Co. at Gloucester, N. J., power house for the combined companies, Ice Palace, Philadelphia, Havre DeGrace Newfoundland Shipbuilding Co. and many smaller projects in both bridges and buildings. (Active practice 26.5 years: Res. Ch. 22.5: Design 14.5). Refers to E. Clark, J. L. Fawley, R. Khuen, Jr., G. L. Taylor, W. S. Twining.

RUSSELL, CLAUD, Assoc. M. Am. Soc. C. E.—Manila, Philippine Islands—(elected July 2, 1913.) (Age 37. Born Elmo, Mo.) (B. S. in Civ. Eng., Kans. Univ., 1907.)—June to 120 Oct. 1907 Detailer, American Bridge Co., Ambridge, Pa.: Dec. 1907 to Aug. 1918 with Bureau of Public Works, Philippine Govt., as Asst. Engr. on surveys and construction (1) (Dec. 1907 to Aug. 1910), Dist. Engr. (Aug. 1910 to Jan. 1915) and Superv. Engr. (Jan. 1915 to Jan. 1918); from Aug. 1910 to Jan. 1918 in charge of road location, construction and maintenance, bridge and wharf construction, municipal water supply, survey, design and construction and building construction (work mostly permanent), macadam roads, concrete and steel bridge and buildings (value from \$500 000 to \$2 000 000 annually); in Jan. 1918 became Acting and later Director of the Bureau in administrative charge of about \$8 000 000 expenditure for public works annually: Aug. to Dec. 1918 Capt., Engrs., U. S. Army, at Camp A. A. Humphreys, Va., as Student Officer: March 1919 to date Gen. Mgr., National Coal Co., Manila, Philippine Islands, in administrative charge of construction of surface plant, railways, docks, aerial cableways and mine development. (Active practice 15.1 years: Res. Ch. 4.5: Design 7.2). Refers to H. F. Cameron, J. H. Caton, 3d, D. E. Henry, C. W. Hubbell, D. Q. McComb, E. P. Shuman, W. C. West.

SHAFFER, IVAN OSCAR, Assoc. M. Am. Soc. C. E.—395 East 16th St., Brooklyn, N. Y.—(elected Oct. 9, 1917.) (Age 35. Born Waterford, Ireland.) (C. E., Brooklyn Pol. Inst., 121 1915.)—Sept. 1906 to May 1907 Rodman, Hudson Tunnel construction: May to Dec. 1907 Min. Draftsman, H. C. Frick Coke Co., Scottdale, Pa.: Nov. 1908 to Sept. 1909 (1) Min. and Gen. Draftsman, U. S. Coal & Coke Co., Gary, W. Va.: Sept. 1909 to May 1910 Eng. Draftsman, movable locks and dams, Ohio River, U. S. War Dept., at Wheeling, W. Va.: May 1910 to May 1911 with Hering & Fuller, New York City, detail and design of water and sewage works, reinforced concrete: May 1911 to Jan. 1916 with George W. Fuller, design of sewage and water-works, reinforced concrete, valuation, etc. (3½ years); Res. Engr. in charge of construction of North Plainfield (N. J.) sewer system (1 year): Feb. to May 1916 with Lehigh Valley R. R., Valuation Dept.: May 1916 to Sept. 1918 Concrete Engr. on design for American Can Co., New York City: Sept. to Oct. 1918 Eng. Designer with Weiskopf & Borroughs, Cons. Engrs., New York City: Oct. 1918 to Nov. 1922 Asst. Chf. Engr. for several months, then Chf. Engr., Fleischmann Constr. Co., New York City, on design and construction of theatres, motion picture studios, film laboratories and miscellaneous structures: Nov. 1922 to date member of firm, Parker & Shaffer, Engrs., New York City. (Active practice 15.1 years: Res. Ch. 6.2: Design 11.2). Refers to H. C. Baird, L. Fleischmann, W. Ginsburg, H. S. Harding, N. M. Loney, J. W. Pickworth, S. C. Weiskopf.

SHRYOCK, JOSEPH GRUNDY, Assoc. M. Am. Soc. C. E.—22d St. and Washington Ave., Philadelphia, Pa.—(elected Junior April 2, 1901; Assoc. M. Dec. 5, 1906.) (Age 42. 122 Born Haddonfield, N. J.) (C. E., 1900, and M. C. E., 1921, Pa. Mil. Coll.)—Dec. 1900 to Nov. 1903 with American Bridge Co., until June 1902 as Draftsman in Bridge and (4) Constr. Dept., Pencoyd Plant, detailing bridge and structural work, then Asst. Designer in Designing Dept., at Wissahickon, Pa., on design and detail of Company's revised standards for highway bridges; after March 1903 Draftsman in Drawbridge Dept., Eastern Div., Drawing Room, Wissahickon, detailing drawbridges: Nov. 1903 to June 1904 Designer, Eng. Dept., Virginia Bridge & Iron Co., Roanoke, Va., in responsible charge of design of bridges, buildings and tank towers: June 1904 to date with Belmont Iron Works as follows: June 1904 to Feb. 1905 Checker in Drafting Room, Philadelphia, on details of bridge and structural work; Feb. 1905 to Feb. 1906 Asst. Chf. Draftsman in charge of preparing general plans for details of bridge and structural work: Feb. to Oct. 1906 Asst. Engr., Eng. Dept., in charge of design of bridge and structural work in office and field; Oct. 1906 to Nov. 1922 Designing Engr., Eng. and Sales Depts., in charge of designs and estimates of bridge and structural work in office and field, also

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contracting; since Nov. 1922 Chf. Engr. in charge of all engineering work in office and field. (Active practice 22 years: Res. Ch. 17.7: Design 17.4). Refers to H. T. Campion, J. Cantley, E. Clark, W. H. Gravell, P. M. Sax, F. D. Shaw, J. H. Terry, S. T. Wagner.

EELE, ISAAC CLEVELAND, Assoc. M. AM. Soc. C. E.—445 Sutter St., San Francisco, Cal.—(elected May 15, 1917.) (Age 36. Born Compton, Cal.) (B. S., Coll. of Civ. Eng., Univ. of Cal., 1909.)—May 1909 to date with Pacific Gas & Elec. Co. of San Francisco, Cal., as follows: May to Aug. 1909 Laborer and Strawboss on construction of Lake Arthur earthen dam; Aug. to Sept. 1909 in charge of test borings for 40-ft. masonry dam in Bear River, Cal.; Sept. 1909 to Jan. 1910 Gen. Foreman at Lake Valley, Cal., raising earth dam, placing riprap, constructing new spillway and outlet tunnel; Jan. to March 1910 office work, computing physical data of canals, dams, flumes and pipe-lines of South Yuba Dist.; March to June 1910 Foreman on replacement of pressure pipes and header boxes, and raising several hundred feet of flume on bents; June 1910 to Jan. 1914 Office Asst. on building inspection, miscellaneous designs and estimates, including buildings, pipe-lines, reinforced concrete work and steel transmission towers; Jan. 1914 to Jan. 1916 Asst. Engr. and Supt. of Bldg. Constr., in charge of construction of four sub-station buildings (fireproof) and other miscellaneous construction, such as foundations, building additions, etc. (total cost of work over \$200 000); Jan. 1916 to Nov. 1920 Asst. Engr. in charge, general supervision of surveys, layout, estimates and designs for 100 c. f. s. South Canal and tunnels below Wise power house near Auburn, Cal. (cost \$190 000); also enlargement and extension of same to 400 c. f. s. in 1921 (cost \$705 000); work included location, preliminary design and partial working drawings for proposed 10 000-k.w. power plant to be operated in conjunction therewith; in charge of engineering work on final 15-ft. raise of Lake Spaulding Dam (present height 275 ft.); numerous other miscellaneous structural and hydraulic problems and designs; since Nov. 1920 Chf. of Div. of Civ. Eng., Dept. of Eng., in charge of all studies relating to methods of production and transmission of water for hydro-electric plants, irrigation systems and domestic water-works; programs for meeting future water demands on the company, development of comprehensive schemes for production, transmission and distribution of water, including location of storage reservoirs, dams, diversion works, conduits, regulating reservoirs, pipe-lines and power plants, also plans therefor, including transmission line structures, foundations, structures and circulating water systems for steam plants and miscellaneous buildings and works. (Active practice 13.5 years: Res. Ch. 7: Design 5). Refers to J. R. Cahill, M. C. Couchot, C. Derleth, Jr., W. L. Huber, A. H. Markwart, H. C. Vensano.

EEETER, HAROLD WARNER, Assoc. M. AM. Soc. C. E.—3d and Kilgour Sts., Cincinnati, Ohio—(elected March 2, 1915.) (Age 38. Born Saratoga Springs, N. Y.)—3½ years student in San. Eng. and 1 year Asst. to Prof. S. C. Prescott, Massachusetts Inst. of Technology: May to Sept. 1906 Draftsman, Board of Water Supply, New York City, in field office on geological surveys for Ashokan Dam: June 1907 to Sept. 1911 Chemist-Bacteriologist, Dept. of Water Supply, New York City, on supervision of filter plants, Long Island, inspection of institutional sewage plants, laboratory and field work in connection with watershed sanitation, and design of new field laboratory: Oct. 1911 to Dec. 1912 Supt. of Filtration, Clarksburg (W. Va.) Water-Works and Sewerage Board, supervision of minor construction details, organization and supervision of operation of filtration and pumping plants, and plans and estimates connected with proposed extensions: Jan. 1913 to Feb. 1914 Superv. Chemist, Baltimore Sewerage Comm., in charge of laboratories, supervision of operation of main Back River and two suburban sewage-treatment works, and experiments and estimates in connection with design of extensions to works: March 1914 to date San. Engr., U. S. Public Health Service, on supervision of laboratory and hydrometric studies, analyses of extensive data and preparation of reports on stream pollution investigations; supervision and preparation of reports on special water-purification studies; plans, surveys, estimates and reports in connection with organization and operation of extra-cantonment zones during the war; supervision of miscellaneous statistical studies; collaboration in developing new formulas on stream purification, and original research in studies of filter plant loading. (Active practice 15.9 years: Res. Ch. 10.2: Design 3.4). Refers to J. W. Ellms, G. W. Fuller, J. R. McClintock, L. Pearse, G. J. Requardt.

SHEBURN, FRANK EDWIN, Assoc. M. AM. Soc. C. E.—P. O. Box 188, North Little Rock, Ark.—(elected Sept. 3, 1913.) (Age 44. Born Sturgeon Bay, Wis.) (B. S. C. E., 1901, and C. E., 1909, Univ. of Wis.)—June to Sept. 1900 Levelman, U. S. Geological

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Survey: June 1901 to March 1911 with Ralph Modjeski as follows: June 1901 to April 1902 Asst. Steel Inspector and Estimator; April 1902 to Dec. 1903 Rodman, Concrete Inspector and Instrumentman; Dec. 1903 to Feb. 1905 Steel Inspector; Feb. 1905 to Sept. 1907 Asst. Engr.; Sept. 1907 to March 1911 Res. Engr., McKinley Bridge across Mississippi River at St. Louis, Mo.; March 1911 to April 1912 Pres., Federal Eng. Co., engineering and Supt.; April 1912 to date Civ. Engr. in charge of construction, Missouri Valley Bridge & Iron Co. on Snake River Bridge, Perry, Wash., O. W. R. & N. Co., White River and Miami River Bridges, Cleves, Ohio, C., C., C. & St. L. R. R. (latter \$300 000), Arkansas River Bridge, Pine Bluff, Ark. (\$700 000), Calcasieu River Bridge, Lake Charles, La., St. Johns River Bridge, Jacksonville, Fla. (\$500 000), Federal Aid Bridge across Missouri River at Boonville, Mo., pumping station, Louisville Water Co. (\$400 000), 10 000-ton floating dry dock for Emergency Fleet Corporation, Galveston, Tex. (\$700 000), and Broadway and Main St. Bridges, Little Rock, Ark. (\$2 000 000). (Active practice 21.7 years: Res. Ch. 17.7: Design 4). Refers to C. E. Chase, E. H. Connor, O. F. Harting, I. G. Hedrick, F. M. Masters, R. Modjeski, H. E. Stevens.

WENDT, WYLIE BRODBECK, Assoc. M. Am. Soc. C. E.—Rapid City, S. Dak.—(elected Oct. 9, 1917.) (Age 37. Born Newport, Ky.) (B. C. E., Univ. of Ky., 1906)—June to 126 Sept. 1906 Asst. Engr., Zeigler (Ill.) Coal Co., drafting, mine surveying, railroad location and construction, street improvement; Sept. 1906 to Sept. 1915 Instructor (4 years) (7) in Civ. Eng., Michigan Agricultural Coll., East Lansing, Mich., and Asst. Prof. (5 years), teaching mechanics, hydraulics, water supply, sewerage, highway engineering, and in charge of hydraulic and cement laboratories; May 1910 to May 1911 also City Engr., East Lansing, Mich., in charge of design and construction of walks, streets, additions to sewer system and to water supply distributing system, septic tank and standpipe; Sept. to Dec. 1915 Inspector and Res. Engr., Dept. of Public Roads, Kentucky, in charge of construction of water-bound macadam roads; Feb. to Sept. 1916 Inspector and Res. Engr., Ft. Thomas, Ky., in charge of construction of bituminous macadam and concrete streets; Sept. 1916 to Sept. 1920 Asst. Prof. (2 years) and Associate Prof. (2 years), Applied Mechanics, Kansas State Agricultural Coll., Manhattan, Kans., teaching and in charge of laboratories of materials testing, hydraulics, cement, concrete and road materials; also Acting Prof. of Military Science and Tactics and Acting Commandant of Cadets (1 year); also organized and directed as Engr. of Tests (3 years), official testing Laboratory, Kansas State Highway Comm.: July to Aug. 1918 in training camp, S. A. T. C., Ft. Sheridan, Chicago, Ill.: June to Sept. 1919 Locating Engr., Miami County, Kans., Federal Aid Road Project, in charge of surveys, plans and estimates, 30 miles bituminous macadam roads; Sept. 1920 to date Prof. of Civ. Eng., South Dakota State School of Mines, Rapid City, S. Dak., Head of Dept., in charge of teaching, and laboratories of materials testing, cement and concrete, and highway engineering. (Active practice 18 years: Res. Ch. 13.6: Design 0.2). Refers to L. E. Conrad, C. D. Curtis, F. F. Frazier, W. S. Gearhart, J. B. Marcellus, H. B. Walker, M. W. Watson.

WOOD, EDWARD AINSLIE, Assoc. M. Am. Soc. C. E.—3700 Maplewood Ave., Dallas, Tex.—(elected April 19, 1920.) (Age 37. Born Dallas, Tex.) (C. E., Cornell Univ., 127 1908.)—July 1908 to March 1909 Transitman, Grand Trunk Pacific Ry. Co. of Canada: March 1909-Dec. 1912 Prof. of Ry. Eng., Chinese Govt. Coll., Foo Chow, China; also (15) Cons. Engr., Y. M. C. A. Bldg., Foo Chow: Sept. 1913 to May 1917 Asst. Engr., Texas & Pacific Ry. Co.: June to Aug. 1917 1st Lieut., Aug. 1917 to April 1918 Capt., and April 1918 to July 1919 Major, U. S. Corps of Engrs., 315th Engrs., 90th Div., 1 year abroad with combat troops: July to Nov. 1919 Res. Engr., and Nov. to Dec. 1919 Div. Engr., Texas State Highway Dept.: Dec. 1919-July 1922 Res. Engr., Metropolitan Development Association of the Chamber of Commerce, Dallas, Tex., in full charge of preparation of a city plan: Aug. 1922 to date City Plan Engr., City of Dallas, in full charge of city plan activities. (Active practice 11.5 years: Res. Ch. 9.9: Design 5.5). Refers to F. N. Baldwin, J. H. Brillhart, E. L. Myers, E. N. Noyes, W. J. Powell.

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COLEMAN, JOSEPH PICKENS, JUN. Am. Soc. C. E.—Box 325, Greenville, Tex.—(elected Nov. 9, 1920.) (Age 25. Born Greenville, Tex.) (B. S. in Civ. Eng., Rice Inst., 1918.)—128 June to Sept. 1916 Transitman, McMahon Constr. Co., on surveying and mapping, generally in charge of party: June to Aug. 1917 Transitman, Gulf Coast Lines, on (15) surveys, generally in charge of party: Aug. to Sept. 1917 with Lewelling Constr. Co. as Transitman and Levelman and Gen. Engr. for Contr., sewer system for Camp U. K., Ark.:

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1 to April 1918 to Jan. 1919 with Corps of Engrs., U. S. Army, first as Private and finally
Concrete 1st Lieut., combat and construction training; Instructor, Officers' Training Camp; Asst.
1905 to Director of Field Training, Camp Humphreys, Va.: Jan. to June 1919 Transitman,
bridge across Pierce Oil Corporation, generally in charge of party, pipe-line and land surveys,
Eng. Co. geological levelling: June 1919 to July 1920 Petroleum Geologist and Engr., Morrison
& Co., Missouri, reports, original sub-surface maps: July 1920 to date member of Plains
& N. Co., Paving Co., in responsible charge of construction, also administration as an executive
& R. (latter during time Company completed over \$600 000 worth of paving work). (Active
bridge, Lake practice 4.7 years: Res. Ch. 4.3: Design 0.5). Refers to H. Miller, J. Montgomery,
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NS, EDWARD ARTHUR, JUN. AM. SOC. C. E.—125 South Primrose Ave., Monrovia, Cal.—(elected Dec. 6, 1920.) (Age 27. Born Muskogee, Okla.)—June 1912 to July 1916 with Walker & Vawter, Archts., Los Angeles, Cal., 1 year as Architectural and Eng. Draftsman and Supt. and 3 years on engineering, drafting and superintendence, also structural designing: July 1916 to March 1917 Structural Engr. with Dean & Dean, Archts., Chicago, Ill.: April to Aug. 1917 Structural Engr. for Wilson & Eager, Monrovia, Cal.: Aug. 1917 to Feb. 1919 with U. S. Army, Heavy Artillery, Instruction in Gunnery and Orientation in Coast Artillery Training Camp at Ft. Monroe, Va.; Asst. to Chf. of Coast Artillery in the office, Washington, D. C.; at present Major in Officers' Reserve Corps, Coast Artillery Sec.: Feb. to Aug. 1919 Surveyor and Supt. of Constr. with H. S. Glerlich, C. E., City Engr., Monrovia: Aug. 1919 to Nov. 1920 Structural Engr. for Walker & Eisen, Archts., Los Angeles, Cal. (Active practice 10.4 years: Res. Ch. 57: Design 3.3). Refers to J. C. Hain, M. Hesselberger, R. P. Miller, F. A. Schilling, J. T. Vawter.

and Res. concrete 2 years), and in lead mate- stant of al testing mp, S. A. i County, 30 miles ota State ing, and engineering. Conrad, Watson. , Dallas, ell Univ., Canada; also r., Texas apt., and , 1 year 1919 Div. TIT, HOMER BANISTER, JUN. AM. SOC. C. E.—Corozal, Canal Zone, Panama—(elected Dec. 6, 1920.) (Age 28. Born Kansas City, Mo.)—June to Sept. 1912 and June to Sept. 1913 Timekeeper, Clerk and Asst. Track Foreman, and June 1914 to Aug. 1915 Rodman, and Aug. 1915 to Jan. 1917 Chainman and Rodman (Acting Instrumentman), Chicago Great Western R. R., Chicago, Ill.: Jan. to June 1917 Rodman, Southern Pacific System (Arizona Eastern R. R.), Phoenix, Ariz.: June to Aug. 1917 Instrumentman, Chf. Engr.'s office, C. G. W. R. R., location, field and office work: Aug. 1917 to Aug. 1919 2d Lieut., Engrs., U. S. Army (through all enlisted grades to 2d Lieut.), with 7th, 13th and 47th Engrs.; 9 months with A. E. F. in France, on railroad construction, maintenance and operation: Aug. 1919 to March 1920 with C. G. W. R. R., 1 month as Instrumentman, Chf. Engr.'s office, Chicago, location; then Asst. Engr., Chicago, maintenance of way engineering, drainage surveys, Dubuque, Iowa, locating and staking out industrial tracks, designing and staking out bridges and culverts and designing and constructing buildings and layouts, drafting and estimating: March 1920 Topographical Draftsman, Clark E. Jacoby Eng. Co., Kansas City, Mo., preparing topographical maps for drainage districts and estimating for drainage work: April to Dec. 1920 Res. Engr., Black & Veatch, Cons. Engrs., Kansas City, municipal engineering (construction), in responsible charge of street paving and storm sewer work, Washington, Kans. (cost of complete work \$200 000): Dec. 1920 to date 1st Lieut., Corps of Engrs., U. S. Army, 12th Engrs., Camp Grant, Ill.; 6th Engrs., Camp Pike, Ark.; 11th Engrs., Corozal, Canal Zone, Panama; military engineering and construction; construction and design. (Active practice 9 years: Res. Ch. 5.2: Design 1.4). Refers to R. P. Bishop, E. B. Black, P. G. Bruton, A. St. A. Fairbanks, W. B. Harrison, R. W. P. LeBaron, H. J. Wild.

ELYE, SETH HENESS, JUN. AM. SOC. C. E.—State Highway Dept., Columbia, S. C.—(elected Nov. 3, 1915.) (Age 31. Born Amherst, Mass.) (B. S. in Civ. Eng., Univ. of Wis., 1915.)—June 1910 to Oct. 1911 Rodman and Levelman, Isthmian Canal Comm., Canal Zone, Panama: Oct. 1911 to March 1912 Asst. Engr. in charge of party on high-way location surveys for Dept. of Fomento, Republic of Panama: March to July 1912 Instrumentman, Panama Tramways Co.: July 1912 to July 1913 Asst. Engr. in charge of party on railroad location and explorations, United Fruit Co., at Puerto Barrios, Guatemala: July 1915 to Dec. 1916 Computer in charge of laboratory for testing concrete aggregates, supervision of wash drill borings, and assisted on estimates of costs of projected railroad relocations for Miami Conservancy Dist.: Dec. 1916 to Nov. 1917 Sales Engr. in charge of sales of repairs, feed water heaters, and specials, Platt Iron Works, Dayton, Ohio: Nov. 1917 to June 1919 Private and Corporal, 23d Engrs., U. S. Army: Sept. 1919 to July 1921 Prin. Asst. Engr. in charge of construction and operation of five irrigation

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tion pumping plants, warehouse, sewers, ditches, farm houses, etc., connected with development of properties of Haytian-American Sugar Co. at Port au Prince, Haiti: Nov. 1921 to July 1922 Chf. of Party on highway location surveys, State Highway Dept. of South Carolina: July 1922 to date Res. Engr. on construction of Federal aid highways, State Highway Dept., Columbia, S. C. (Active practice 9.9 years: Res. Ch. 6.2). Refers to R. A. Conard, H. S. R. McCurdy, C. H. Paul, F. W. Stephens, A. I. Stiles.

STOCKWELL, HARRY DAVID, JUN. AM. SOC. C. E.—Sewell, Rancagua, Chile—(elected Oct. 14, 1919.) (Age 30. Born Niagara Falls, Ont., Canada.)—Aug. 1915 to date with 132 the Braden Copper Co. as follows: Aug. 1915 to Feb. 1916 Chainman and Tracer; Feb. to Oct. 1916 Chainman and Levelman; Oct. 1916 to Aug. 1917 Levelman, Translaman, (1) Mapper and Hydrographer; Aug. 1917 to June 1922 Chf. Surveyor, in charge of surveying and of compiling cost data in connection with construction work (over \$3 000 000); since June 1922 Outside Engr. in charge of construction and repair work with the Civ. Eng. Dept. (Active practice 7.2 years: Res. Ch. 5.2). Refers to J. W. Straney. (Applies in accordance with Sec. 1, Art. 1, of the By-Laws.)

TIETZEL, ALBERT MICHAEL, JUN. AM. SOC. C. E.—107 E. 2d St., Corning, N. Y.—(elected March 11, 1919.) (Age 31. Born Keyport, N. J.)—1911 graduated from 133 Technical Inst., Bremen, Germany: June 1907 to Aug. 1908 Chainman, Rodman and Instrumentman on construction and surveys, Cambria Steel Co., Johnstown, Pa.: (3) July 1911 to April 1912 with O. P. Thomas, Cons. Engr., Johnstown, as Topographical Draftsman and on dam design, also occasional mine surveys: May to Sept. 1912 Mech. Draftsman and Designer, Spring Stopper Co., Brooklyn, N. Y., designing and drawing parts for small automatic presses for manufacturing metal bottle stoppers: Sept. 1912 to March 1913 Topographical Draftsman on municipal highway work, Borough President's Office, Bureau of Design and Survey, New York City: March to Aug. 1913 First-class Structural Draftsman designing mill buildings, cranes, etc., for U. S. Navy Yard, Brooklyn, N. Y., Dept. of Public Works; also some topographical work in connection with map of navy yard and river soundings: Sept. to Oct. 1913 Jun. Asst. Engr., Public Service Comm., First Dist., New York State, on underground pipe layouts, Div. of Sub-structures: Oct. to Dec. 1913 First-class Structural Draftsman, U. S. Navy Yard, Brooklyn, on design of large dry-dock, also mill buildings: Jan. 1914 to Sept. 1915 Jun. Asst. Engr., Div. of Designs, Public Service Comm., First Dist., New York City, on design of subway structures, elevated railroad stations, etc.: Sept. to Nov. 1915 special work studying ventilation problems for subways in New York City, reported to Alfred Craven, Chf. Engr.: Nov. 1915 to March 1917 field and office work, inspection, estimates, records, also design and investigations for subaqueous tunnels, East River, N. Y.: March 1917 to Jan. 1919 Designer, made complete layout and studies for by-product coke plant, in charge of design of large coal storage building: Jan. 1919 to date Designer of automatic machinery for glass industry, Corning Glass Works, responsible on development work; at present in charge of design for large machine shop and other structures. (Active practice 12.5 years: Res. Ch. 2.5: Design 9.8). Refers to G. C. Brown, W. E. Brown, T. A. Currie, Jr., M. H. Freeman, C. M. Holland, J. B. Snow.

VARNEY, EDWARD ALLEN, JUN. AM. SOC. C. E.—331 Harvard St., Cambridge, Mass.—(elected Nov. 25, 1919.) (Age 28. Born Orange, Mass.) (B. S. in C. E., Worcester Pol. Inst., 1916.)—June to Sept. 1912 inspecting gears and twist drills, Union Twist Drill Co., Athol, Mass.: June to Sept. 1913 with Associated Efficiency Engrs., New Home (2) Sewing Machine Co., Orange, Mass., cost work and drafting: June to Sept. 1914 with Reed-Prentice Co., Worcester, Mass., mechanical drafting and filing systems: June to Sept. 1915 with Central Bldg. Co., Worcester, outside work on forms and inspection on Worcester Tech. Gymnasium: June 1916 to Nov. 1917 (except Jan. to March 1917) with Eastern Bridge & Structural Co., Worcester, drafting and design on all kinds of structural steelwork, including buildings, bridges, conveyors, turntables, etc.: Jan. to March 1917 loaned to New England Structural Co., Everett, Mass., on design and drafting of plate girders for Edison Elec. Light Co. job: Dec. 1917 to March 1918 with Aberthaw Constr. Co., drafting and design of concrete buildings for Victory Destroyer Plant at Squantum, Mass., Blake & Knowles Pump Corporation, Cambridge, Mass., and Providence Boiler Works: March to Oct. 1918 loaned by this Company to Faz. Spofford & Thorndike, Cons. Engrs., Boston, on construction of Boston Army Supply Base, drafting, design, scheduling, progress work and checking: Oct. 1918 to date (except summers) at Wentworth Inst., responsible charge of construction in architectural construction.

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strength of materials and Concrete Products Testing Laboratories, courses in estimating, mathematics and applied mechanics: June to Sept. 1919 with Aberthaw Constr. Co. on design of concrete building for Seamless Rubber Co., New Haven, Conn.: June to Sept. 1920 and spare time until Jan. 1921 (total 6 months) with Guy Lowell, Archt., Boston, on structural steel design for New York County Court House: June to Sept. 1921 and June to Sept. 1922 Instructor, Veterans Bureau Summer School: also on miscellaneous design for W. C. Voss, Cons. Engr., Boston. (Active practice 6.3 years: Res. Ch. 4: Design 2.7). Refers to C. W. Banks, A. W. French, E. D. Kingman, S. H. Thorndike, W. C. Voss.

TER, ROBERT GWINN, JUN. AM. SOC. C. E.—Eskdale, W. Va.—(elected Nov. 21, 1921.) (Age 27. Born Greenville, W. Va.)—March 1915 to Sept. 1916 Rodman, Vandalia Ry. Co.: Sept. 1916 to Oct. 1917 Transitman on highway location and construction, Fayette County, W. Va.: Oct. 1917 to Aug. 1919 and Dec. 1919 to May 1920 Asst. to Div. Engr., Chesapeake & Ohio Ry. Co., on surveys and maps of lands, plans and estimates for trackwork, bridges and buildings: Aug. to Dec. 1919 Office Engr., Wayne County, W. Va., in charge of office making plans for 25 miles of highway grading and drainage work, also estimates for same: May to Oct. 1920 Location Engr., Raleigh County, W. Va., in charge of party locating 15 miles of State Class A road: Oct. 1920 to date Supervisor of track, C. & O. Ry. Co., until Oct. 1921 in charge of maintenance of 95 miles main line and 15 miles of yards at Logan, W. Va., and since then at Eskdale, W. Va., in charge of 70 miles of main track and 25 miles of yards and sidings. (Active practice 7.7 years: Res. Ch. 3.4: Design 2.5). Refers to C. L. Allen, H. R. Anderson, H. A. Levering, J. K. McGrath, H. J. Spelman.

OLWORTH, WENDELL HOWARD, JUN. AM. SOC. C. E.—49 Wall St., New York City.—(elected Sept. 12, 1916.) (Age 31. Born Niagara Falls, N. Y.) (B. S., Dartmouth Coll., 1915; C. E., Thayer School of Civ. Eng., 1916.)—Summer vacation 1915 on highway construction, Rich Constr. Co., East Aurora, N. Y.: 1916 (3 months) Jun. Asst. Engr., Public Service Comm., New York City: June—Nov. 1916 with 7th Regt., N. Y. N. G., on Mexican Border: Nov. 1916 to May 1921 with U. S. Army, first as 2d and 1st Lieut., 28th U. S. Infantry (Regular Army); Jan. to April 1917 at Army Service Schools, Ft. Leavenworth, Kans.; June 1917 to Aug. 1918 with 28th Inf., 1st American Div., A. E. F., in France; Aug. to Oct. 1918 Major, Infantry, 3d Div., A. E. F.: Oct. to Nov. 1918 wounded in hospital, Paris; Dec. 1918 to April 1919 Executive Officer, Camp MacArthur, Waco, Tex.; April to June 1919 Asst. Executive Officer, Camp Meade, Md.; June to Oct. 1919 Asst. Troop Movement Officer, Headquarters, Port of Embarkation, Hoboken, N. J.: Oct. 1919 to April 1920 with Zone Transportation Officer, New York City: April 1920 to May 1921 Asst. Dept. Transportation Officer, Headquarters, Panama Canal Dept., Balboa, Canal Zone: May 1921—July 1922 with Eng. Dept., Metropolitan Office, Ocean Accident & Guarantee Corporation, Ltd., New York City, inspection, underwriting and rating: Sept. 1922 to date Representative at Large, Johnson & Higgins, New York City, industrial protection, inspection and rating, Workmen's Compensation. (Active practice 4.7 years: Res. Ch. 4.7). Refers to R. Fletcher, C. A. Holden, O. E. Hovey, H. E. Plumer, J. P. Snow.

The Board of Direction will consider the applications in this list not less than thirty days after the date of its issue.

JOHN H. DUNLAP,
Secretary.